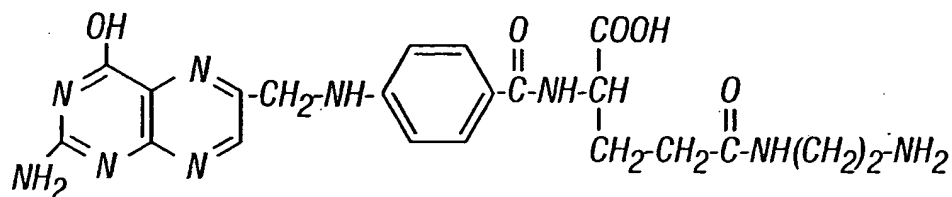
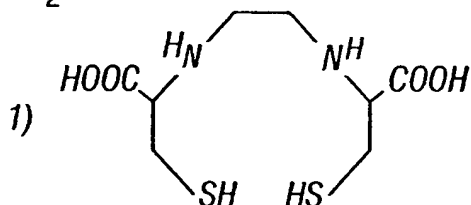


Folic Acid

Ethylenediamine  
EEDQ

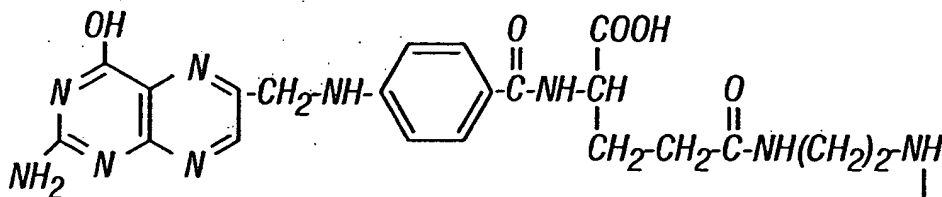


Folate NH<sub>2</sub>



(EC), Sulfo-NHS, EDC

2) Na<sup>99m</sup>TcO<sub>4</sub> / SnCl<sub>2</sub>



<sup>99m</sup>Tc-EC-folate

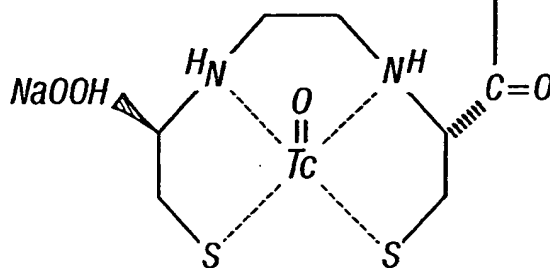
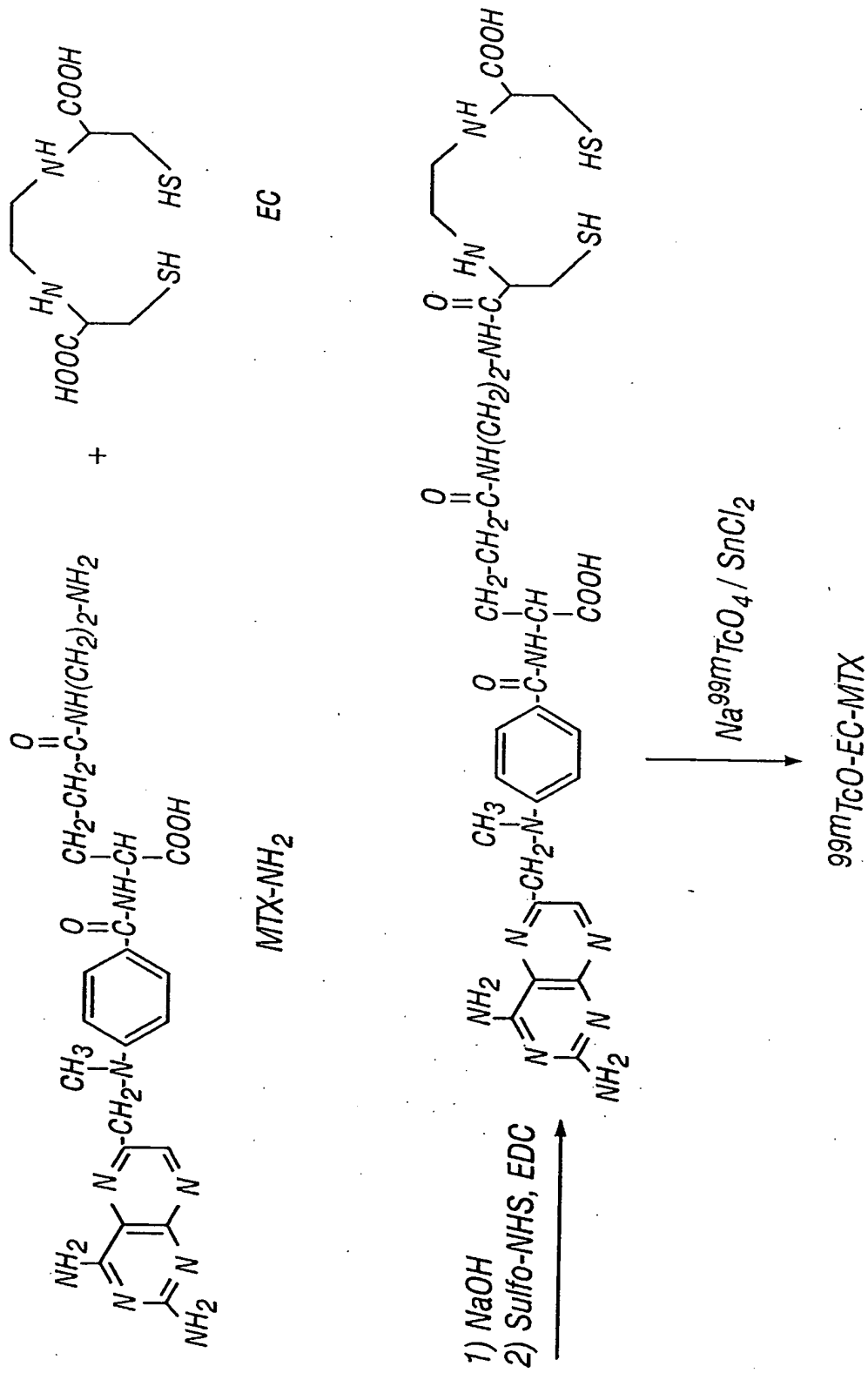
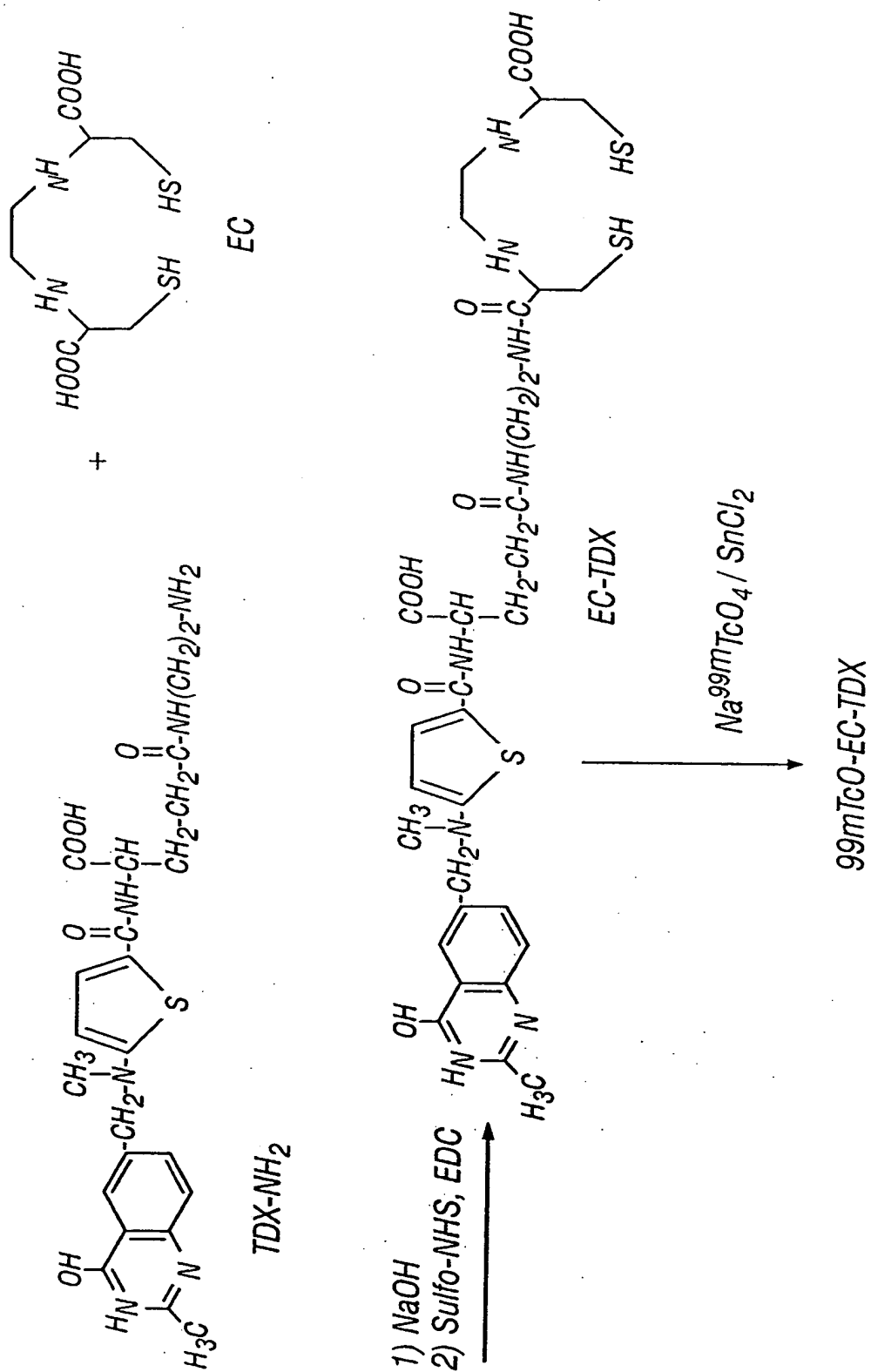


FIG. 1



**FIG. 2**



**FIG. 3**

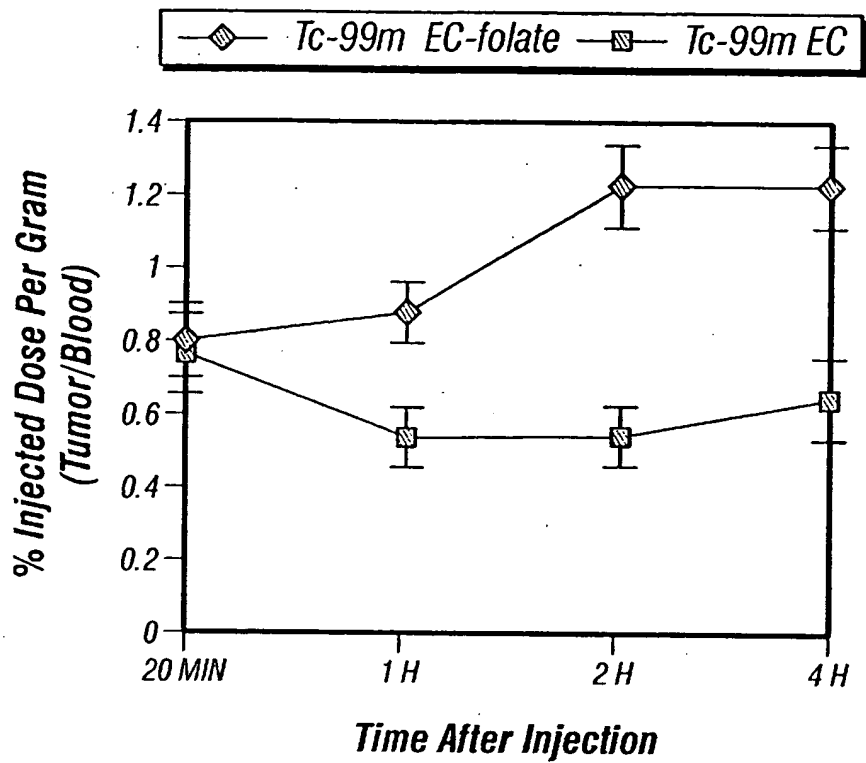


FIG. 4

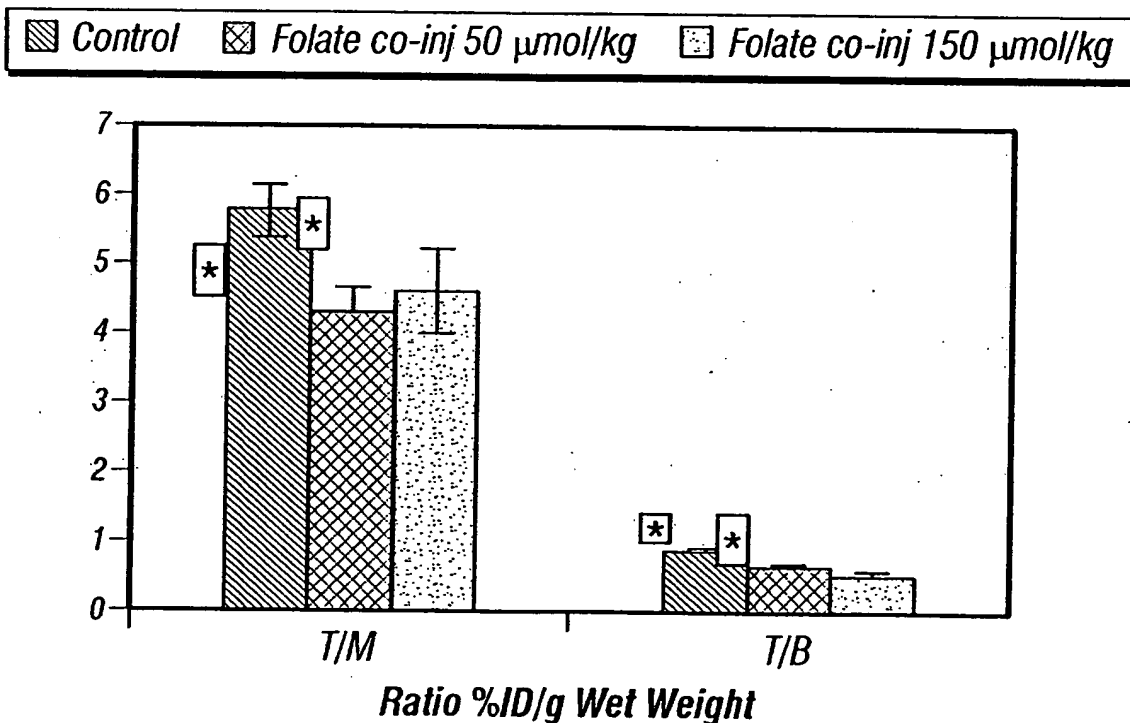


FIG. 5

Tc-99m EC

Tc-99m EC-folate

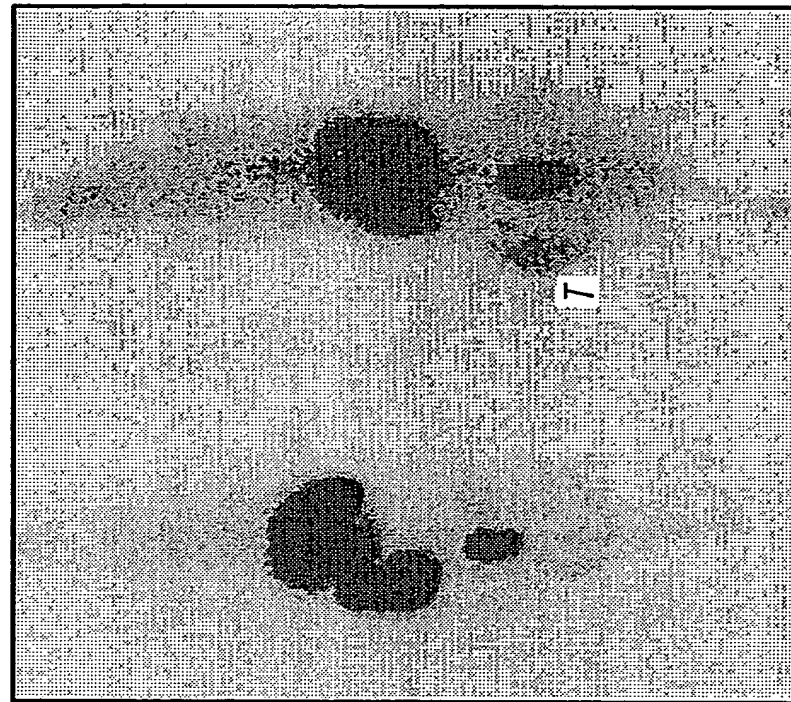


FIG. 6B

Tc-99m EC

Tc-99m EC-folate

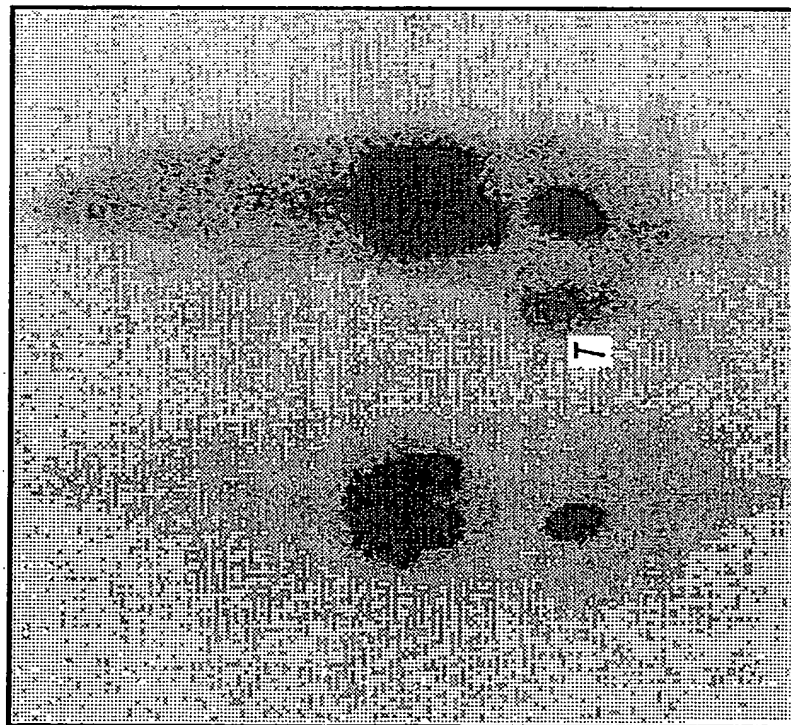
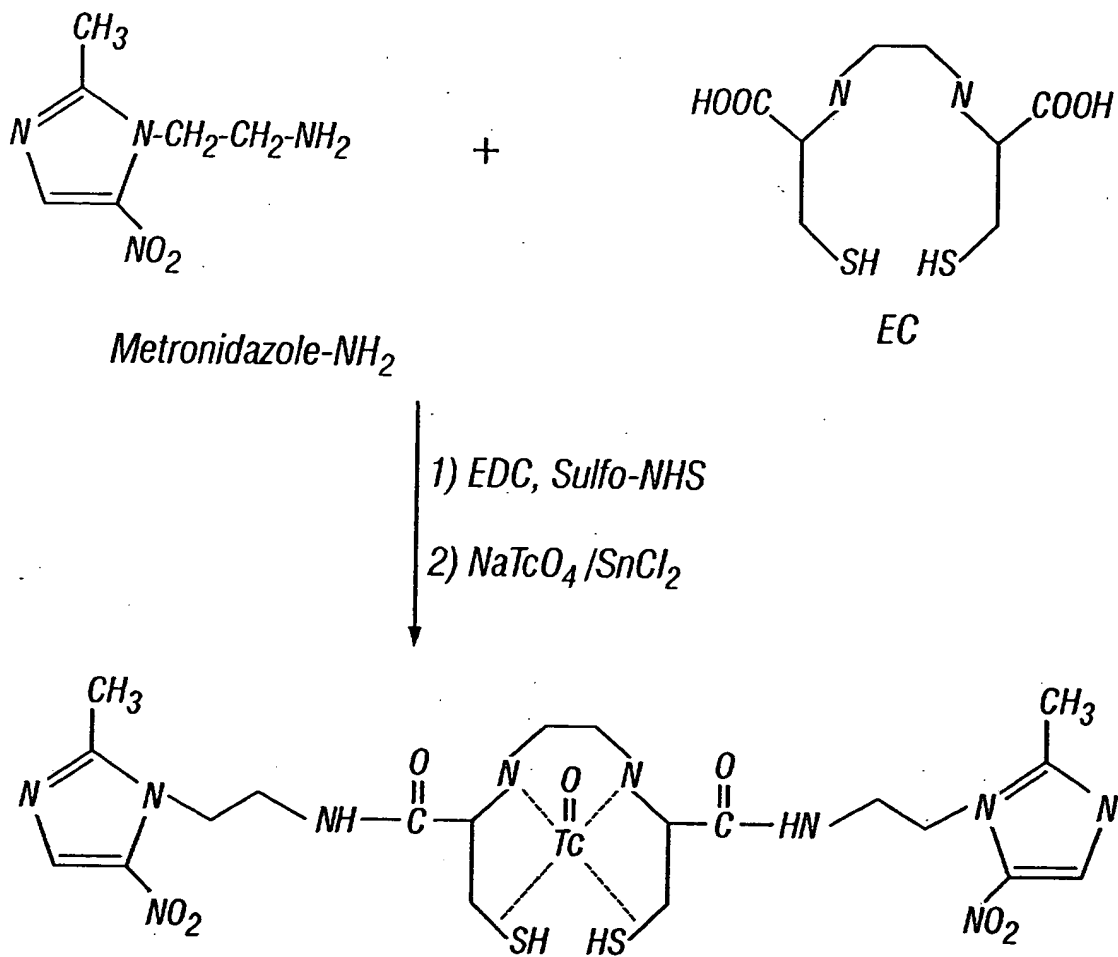
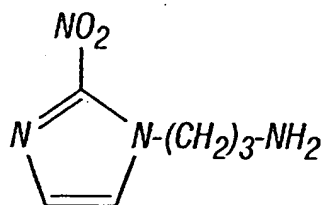


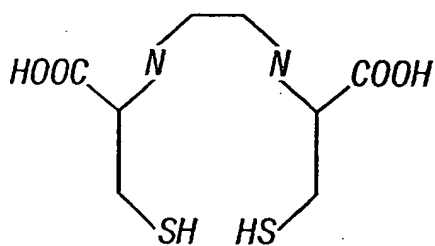
FIG. 6A



**FIG. 7**



2-Nitroimidazole-NH<sub>2</sub>



EC

1) EDC, Sulfo-NHS  
2) NaTcO<sub>4</sub> / SnCl<sub>2</sub>

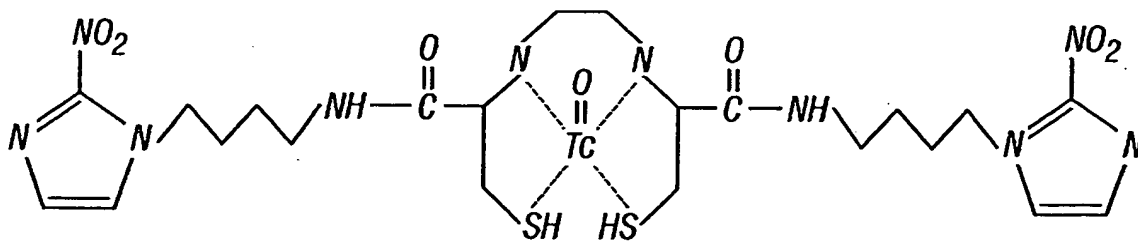
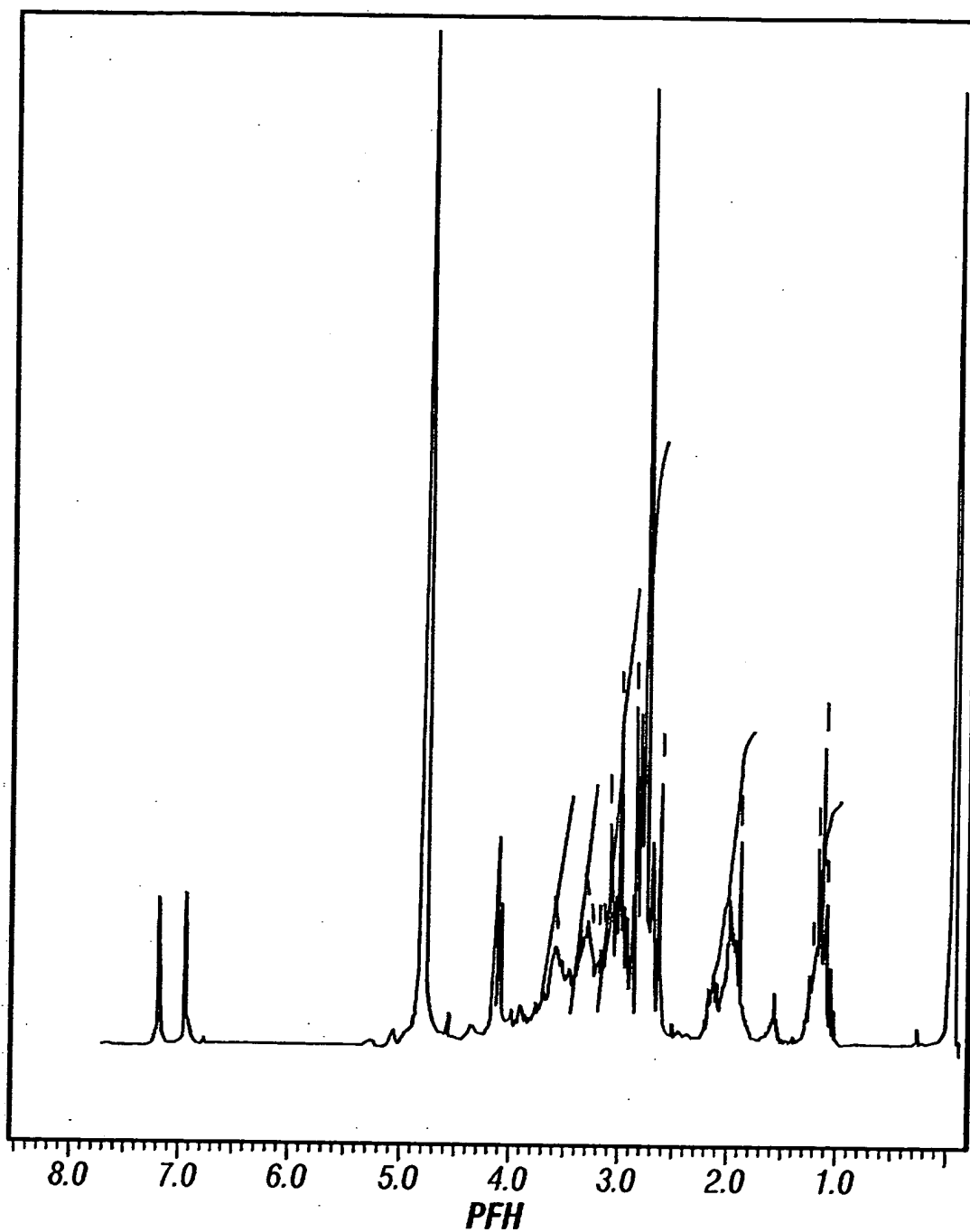


FIG. 8A



**FIG. 8B**



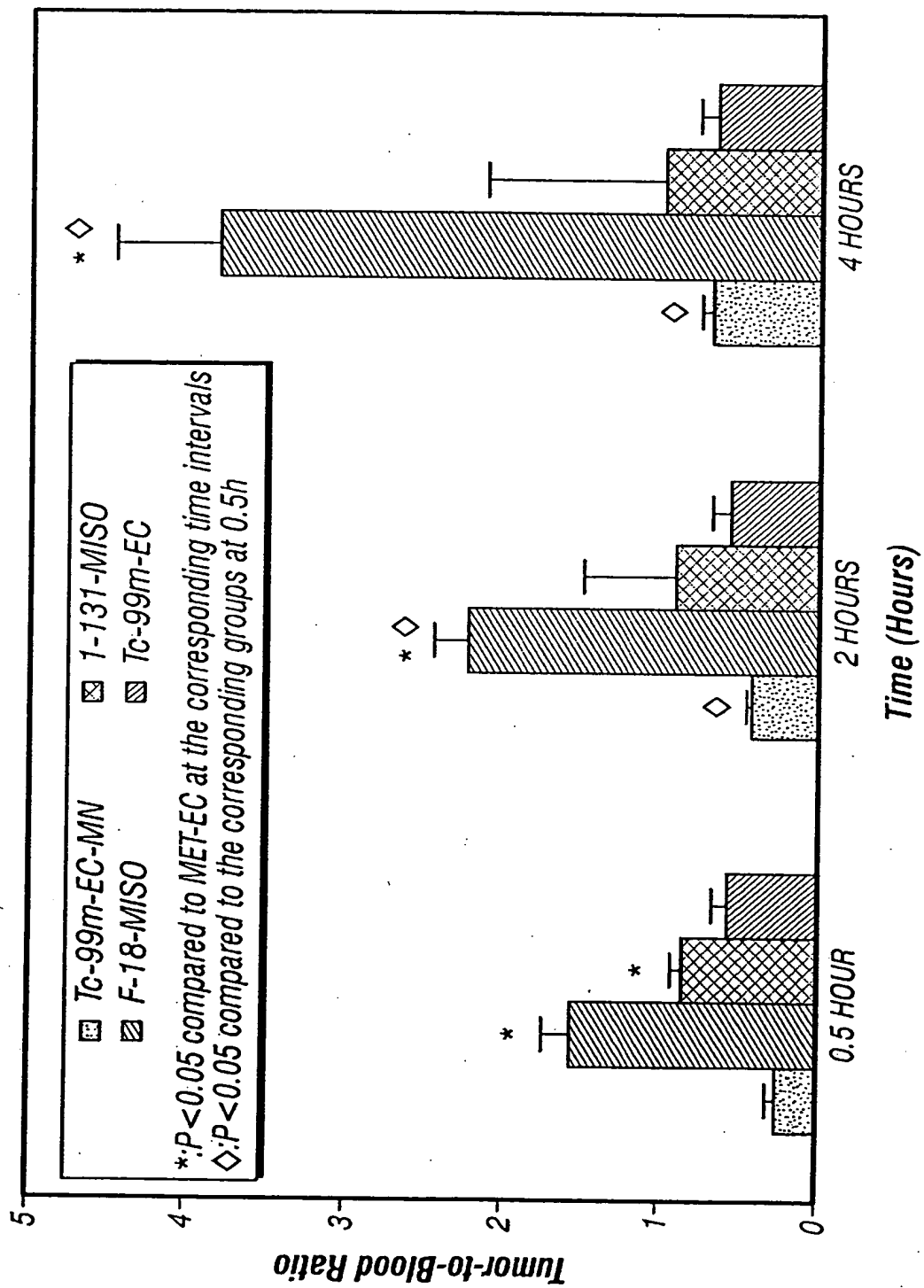


FIG. 9

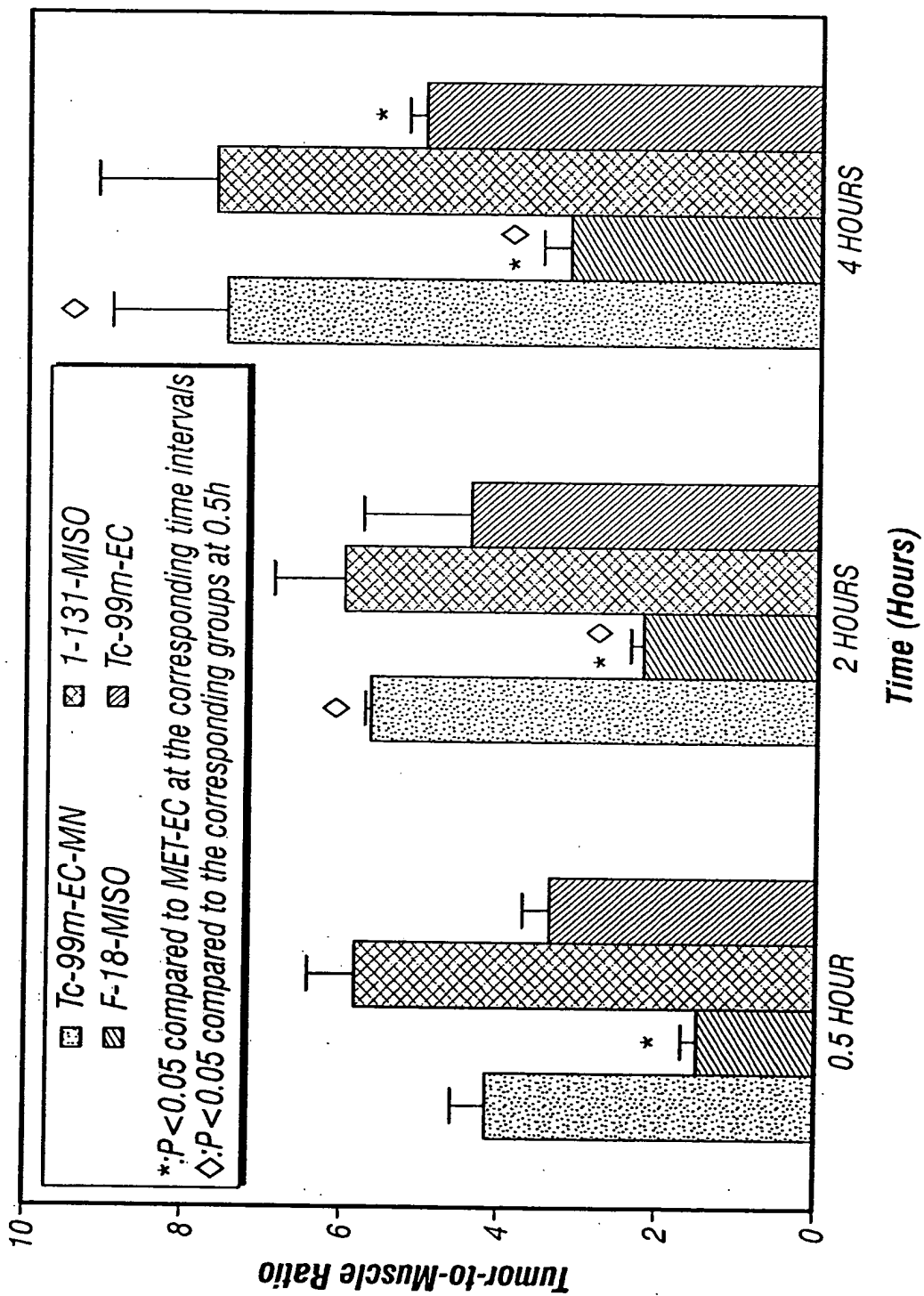
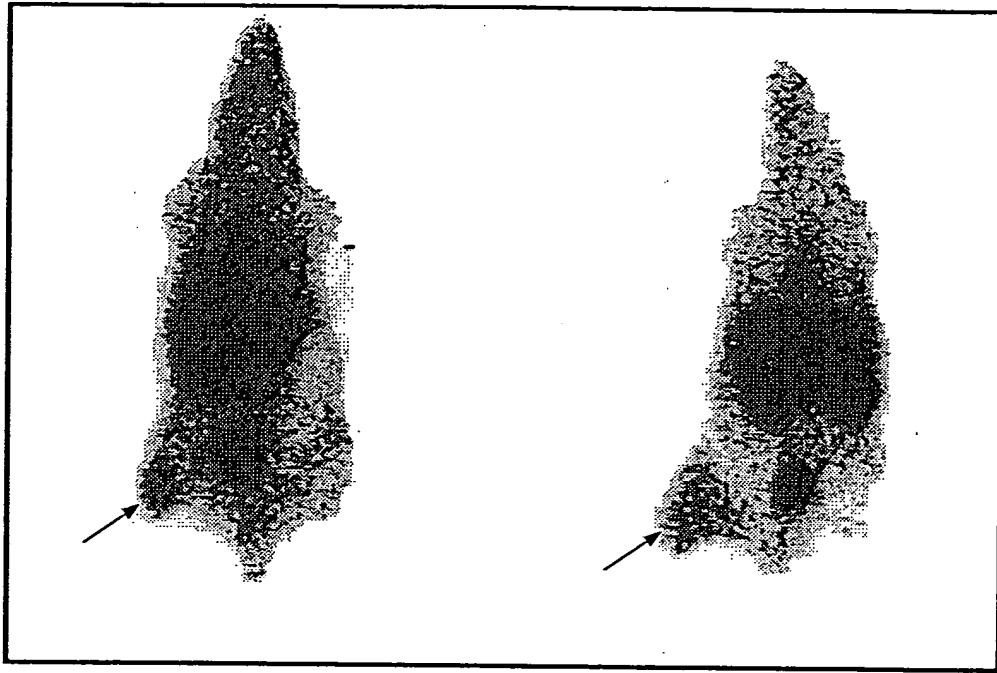
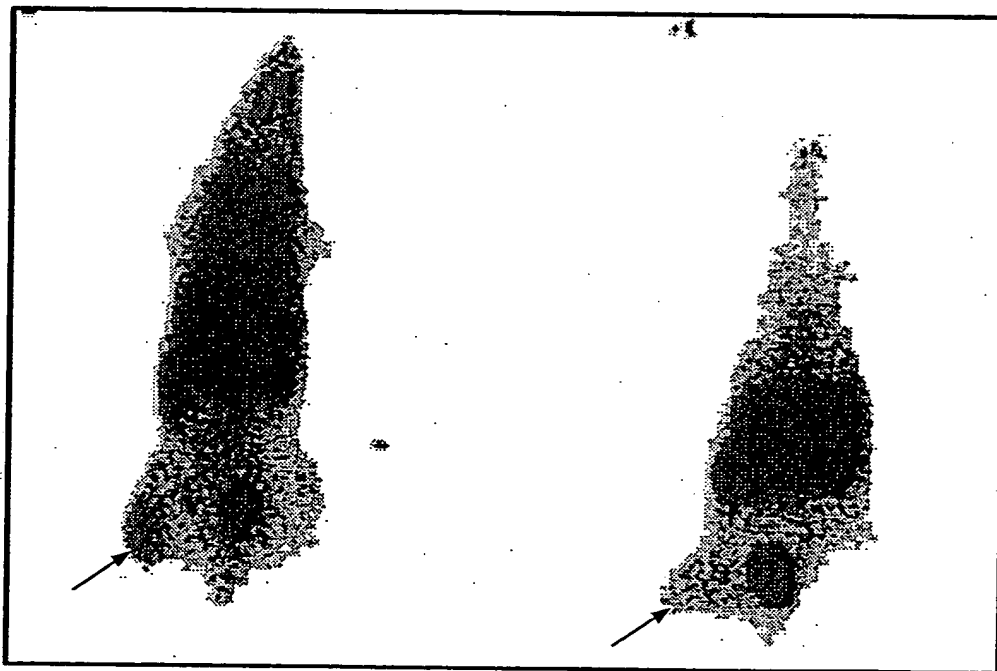


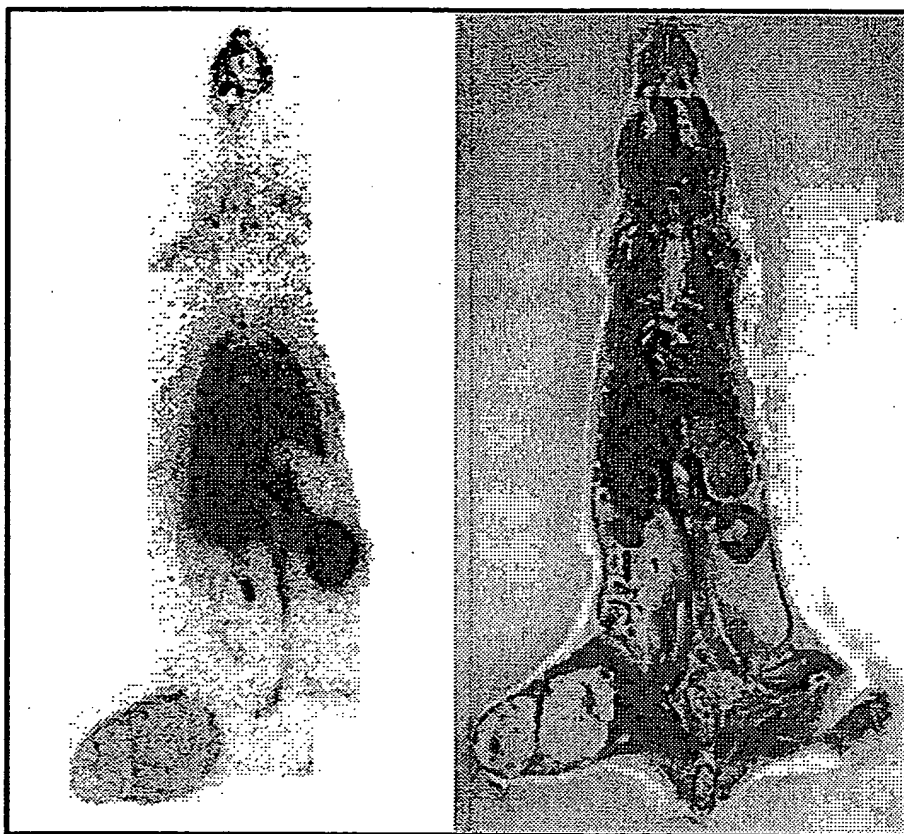
FIG. 10



**FIG. 11A**



**FIG. 11B**



**FIG. 12**

3-10-1999

EC-(2-NH)2 after adding serum 3

Date: Mar 10 1999  
Data File:

Start time: 16:02

Accum time: 00:00:50  
Plate: 1 Lane: 1

Elect Resolution: NORMAL

(Amp. Range: 0 - 2047)

Stop counts: 50000

Stop Counts Region: 0.00 to 20.00 cm

Rf Calculations: Origin: 1.50 cm

Solvent Front: 19.00 cm

Integration Parameters: Auto Integration

Peak slope: 1.0

Min width: 0.1

Min %: 2.0

Total Count Region: 0.00cm to 20.00cm

Total Counts: 53170

Total CPM: 63810

Reg. #	Start (cm)	Stop (cm)	Center (cm)	Rf	Region Counts	Region CPM	% of Tot Reg	% of Tot Cr
1	0.60	4.40	2.50	0.06	4557	5468	9.02	8.9
2	8.20	16.80	12.56	0.63	45980	55180	90.98	86.4
TOTAL					50540	60650	100.00	95.0

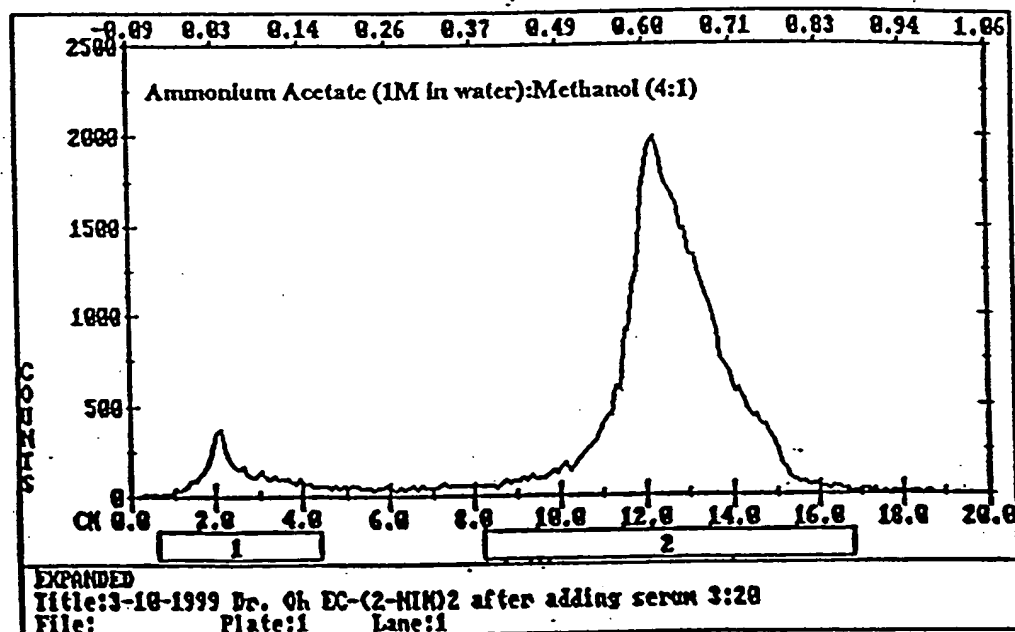
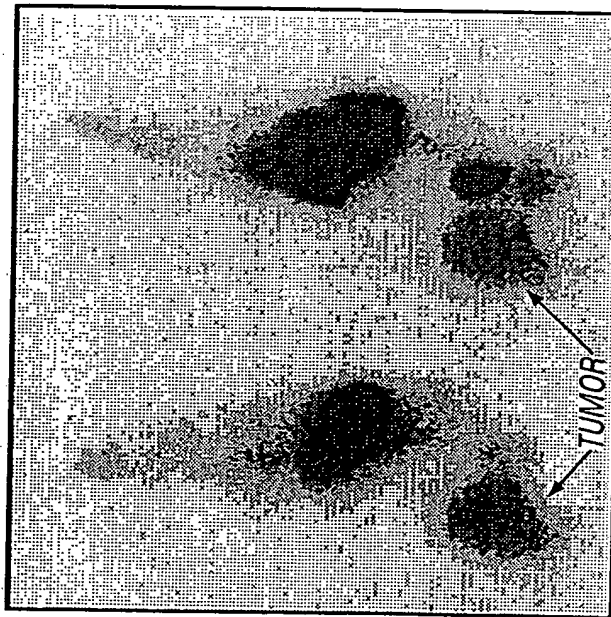


FIG. 13

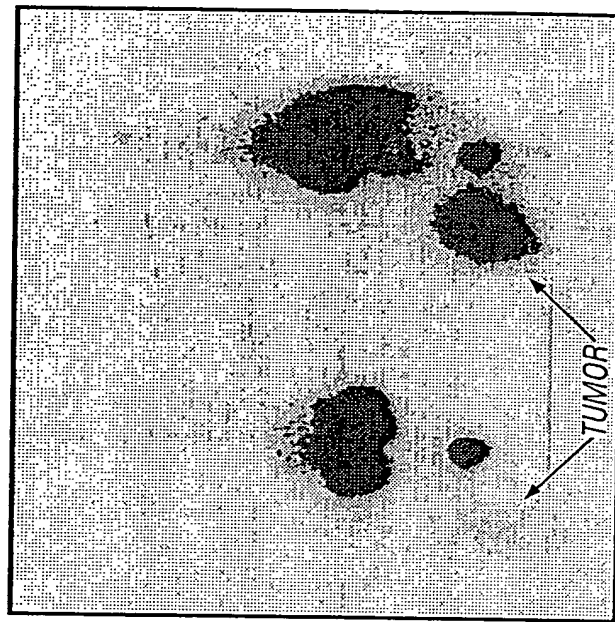
$^{99m}\text{Tc-EC}$        $^{99m}\text{Tc-EC-NIM}$



15 MIN.

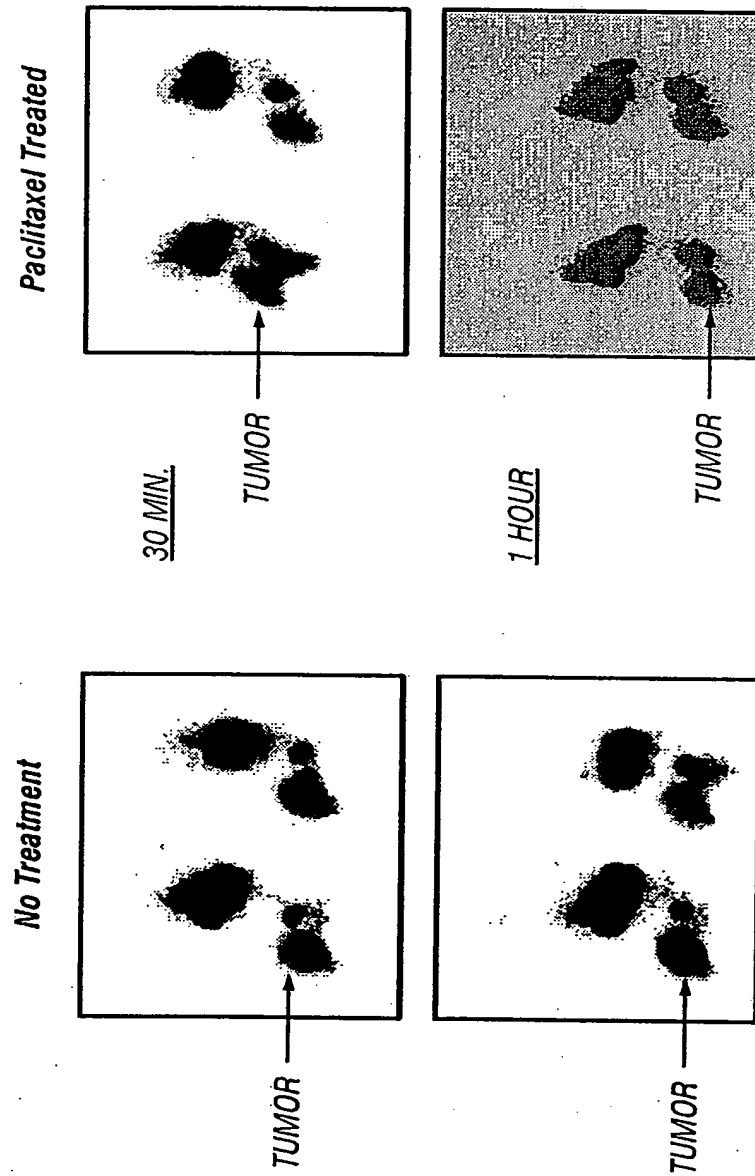
$^{99m}\text{Tc-EC}$

$^{99m}\text{Tc-EC-NIM}$



4 HOUR

**FIG. 14A**



**FIG. 14B**

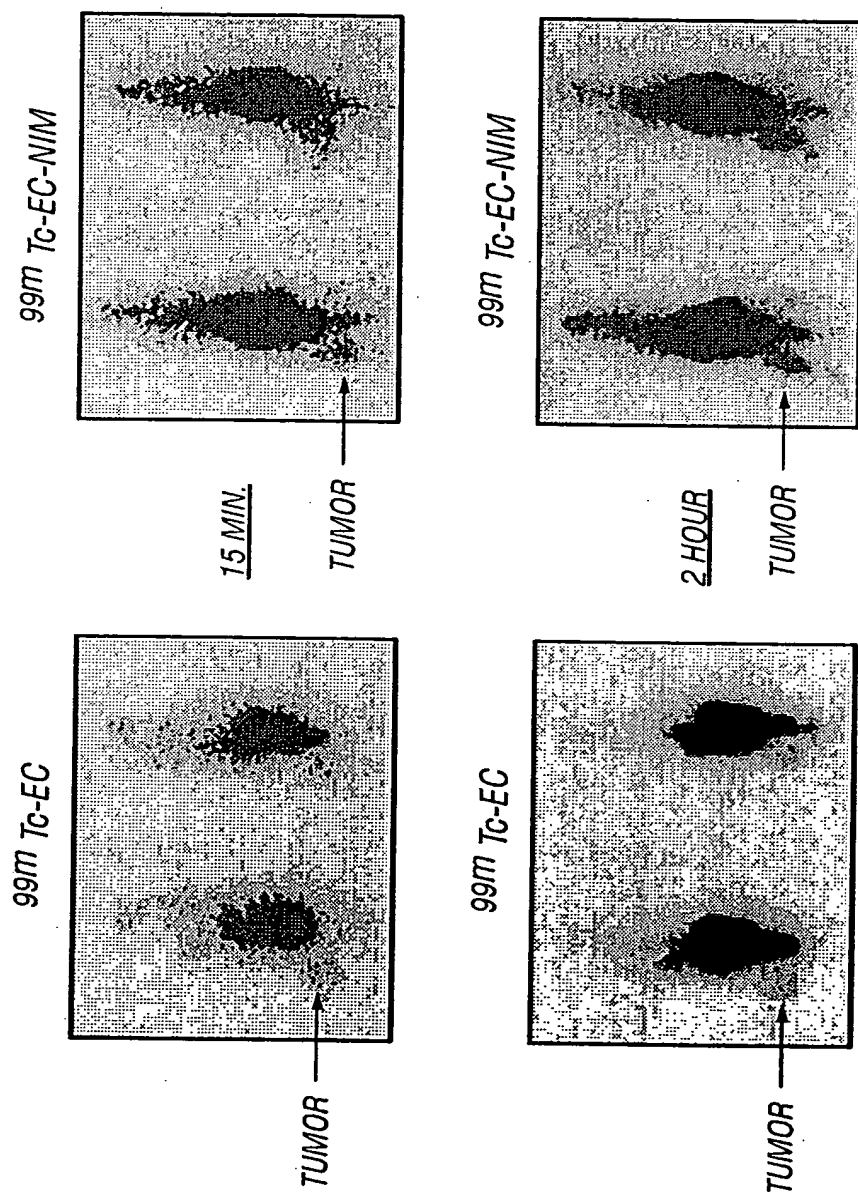


FIG. 15A



*99m* Tc-EC-Nitroimidazole (NIM)  
(100 $\mu$ Ci/mouse, iv.)

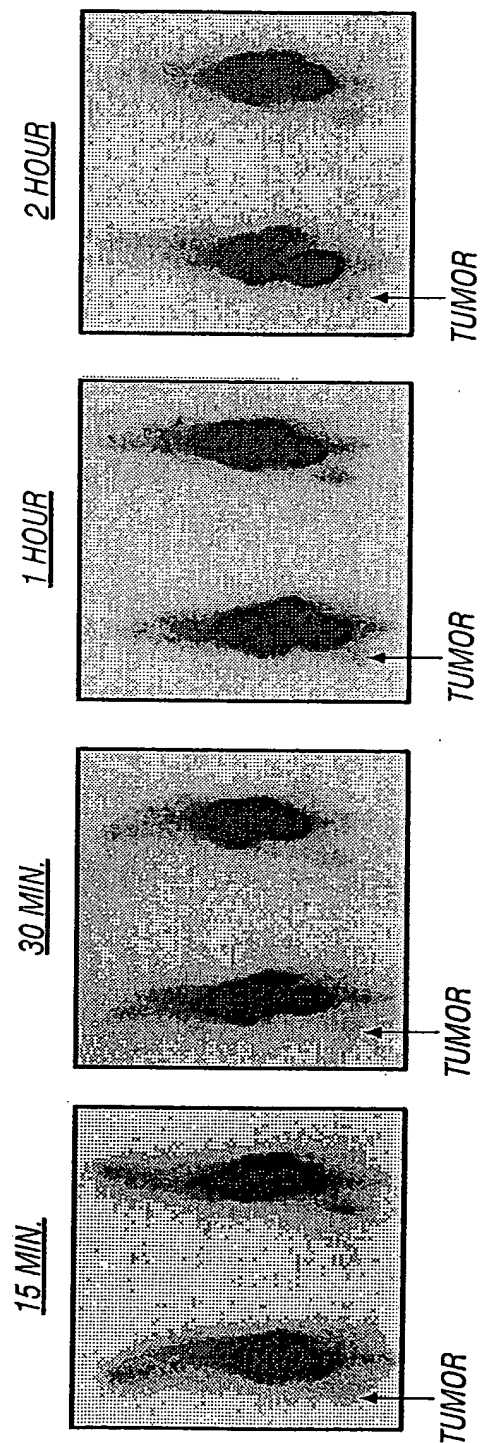
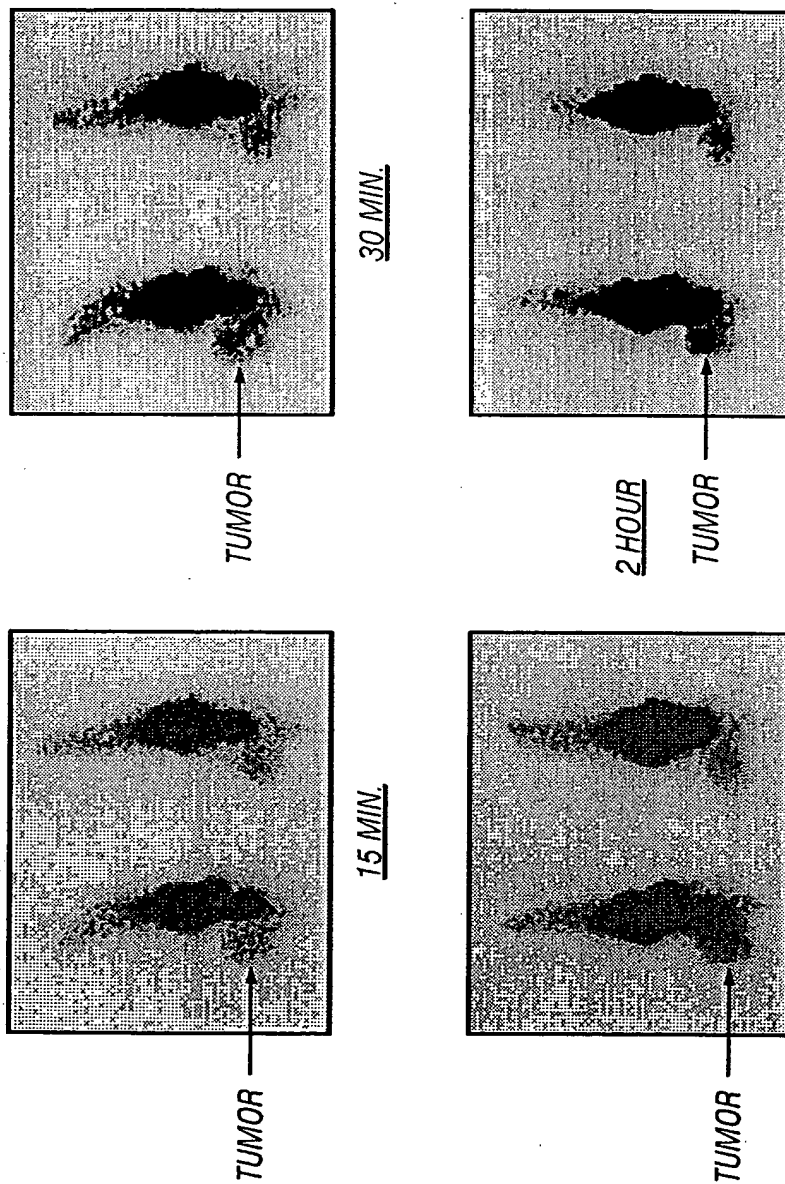


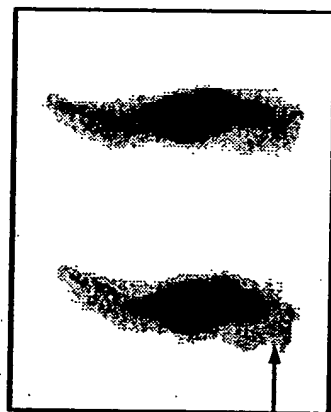
FIG. 15B

*<sup>99m</sup>Tc-EC-Nitroimidazole (NIM)*



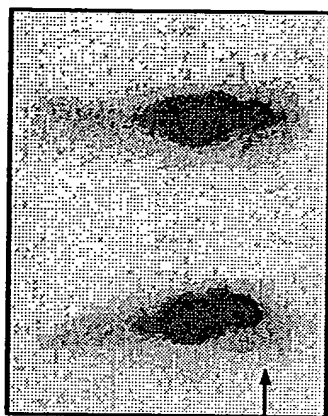
**FIG. 15C**

*<sup>99m</sup>Tc-EC-Nitroimidazole (NIM)  
(100 $\mu$ Ci/mouse, iv.)*



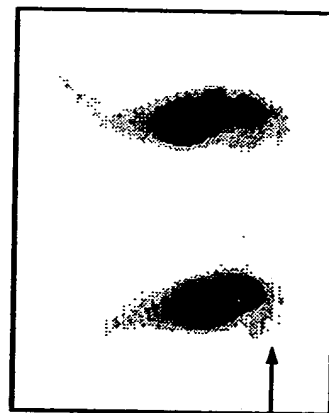
TUMOR

15 MIN.



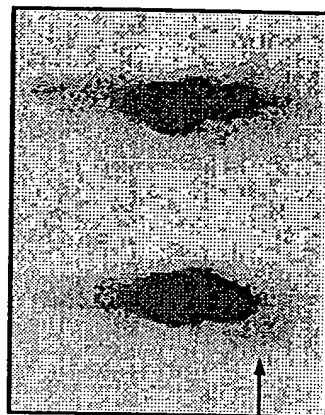
TUMOR

30 MIN.



TUMOR

1 HOUR

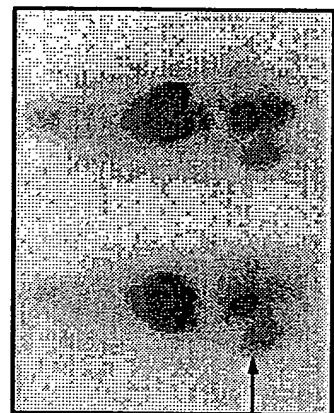


TUMOR

2 HOUR

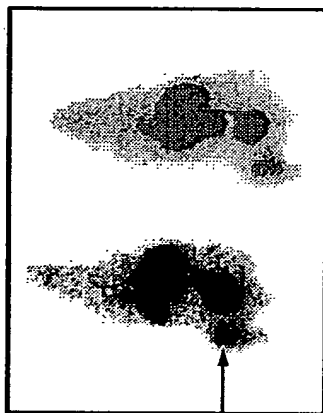
**FIG. 15D**





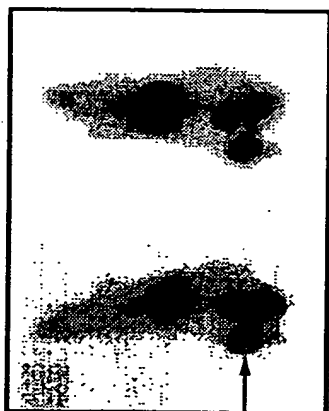
30 MIN.

TUMOR



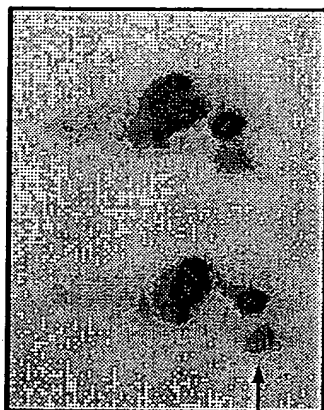
2 HOUR

TUMOR



15 MIN.

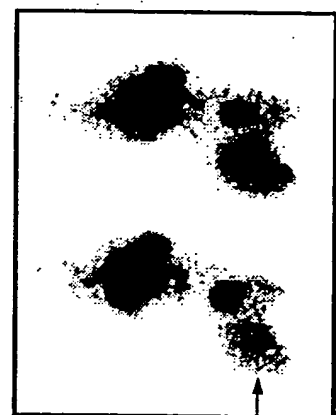
TUMOR



1 HOUR

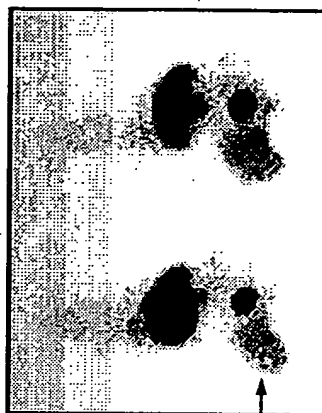
TUMOR

FIG. 17



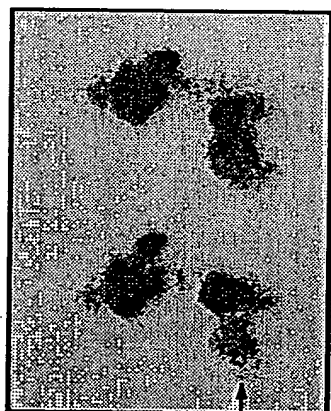
30 MIN.

TUMOR



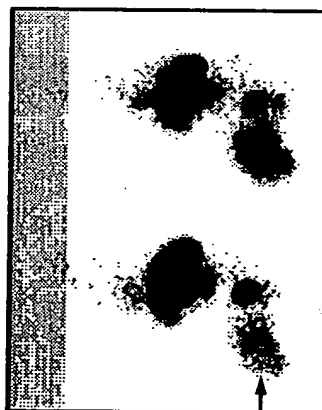
2 HOUR

TUMOR



15 MIN.

TUMOR



1 HOUR

TUMOR

FIG. 18

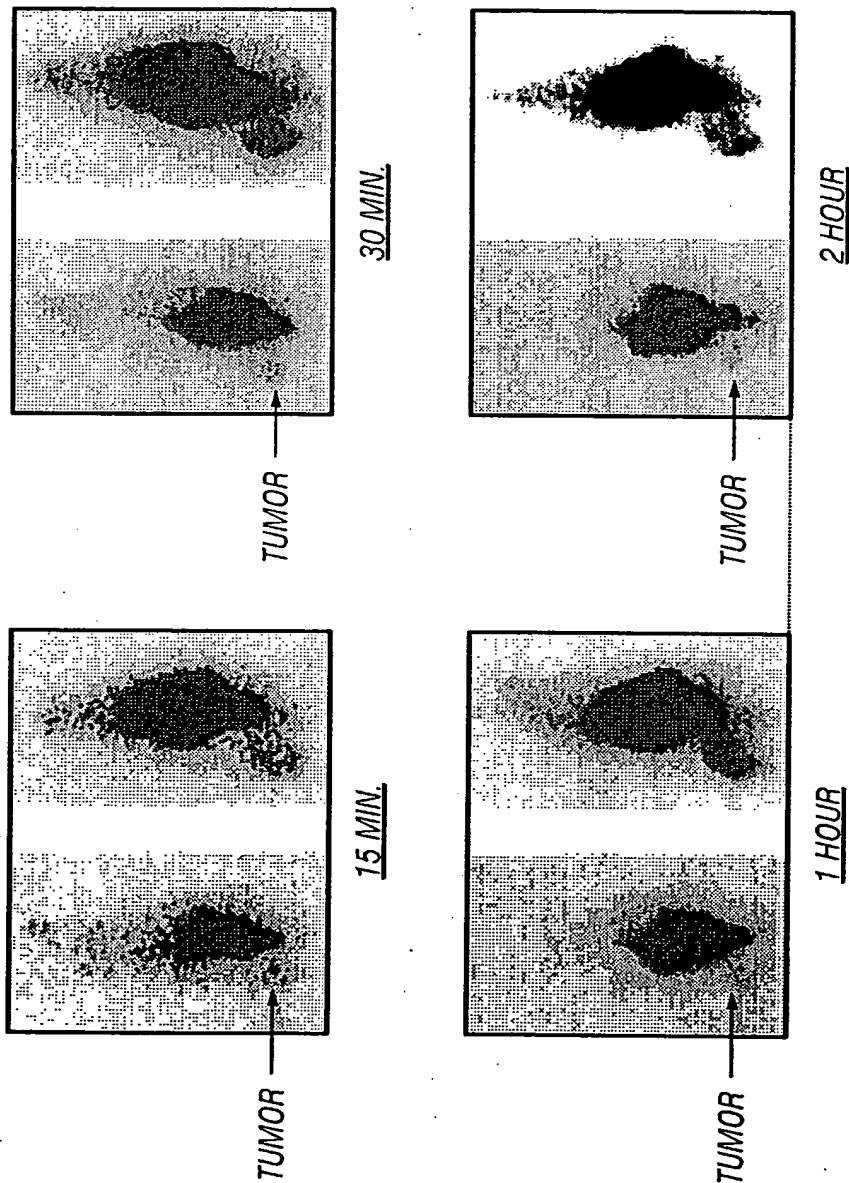


FIG. 19A

$^{99m}\text{Tc}$ -EC-Annexin V  
(100  $\mu\text{Ci}$ /mouse, iv.)

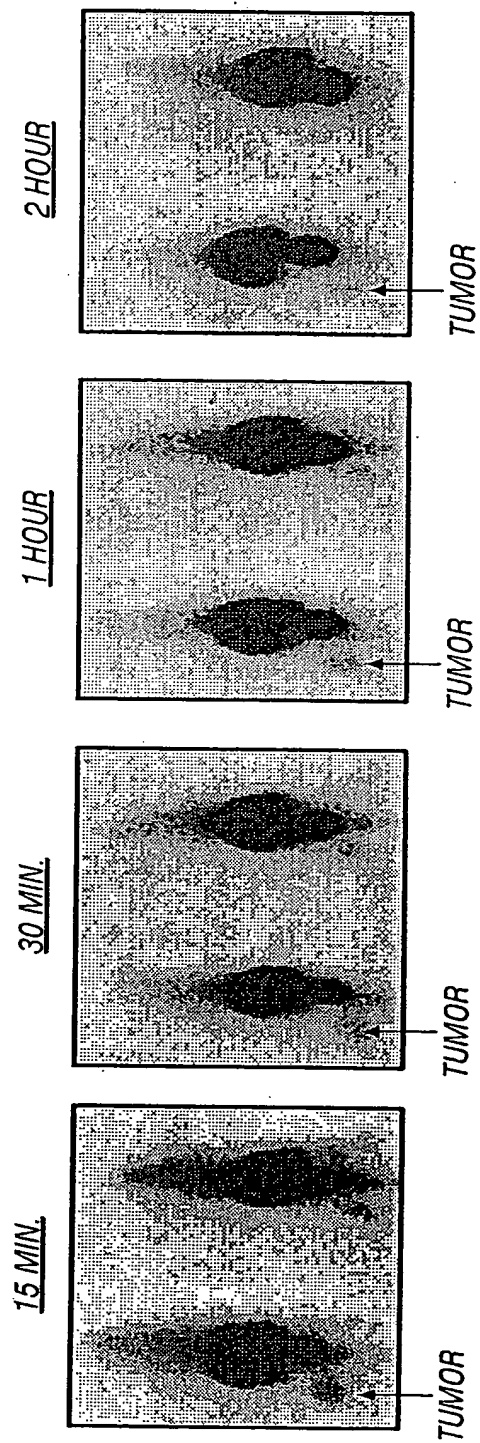


FIG. 19B



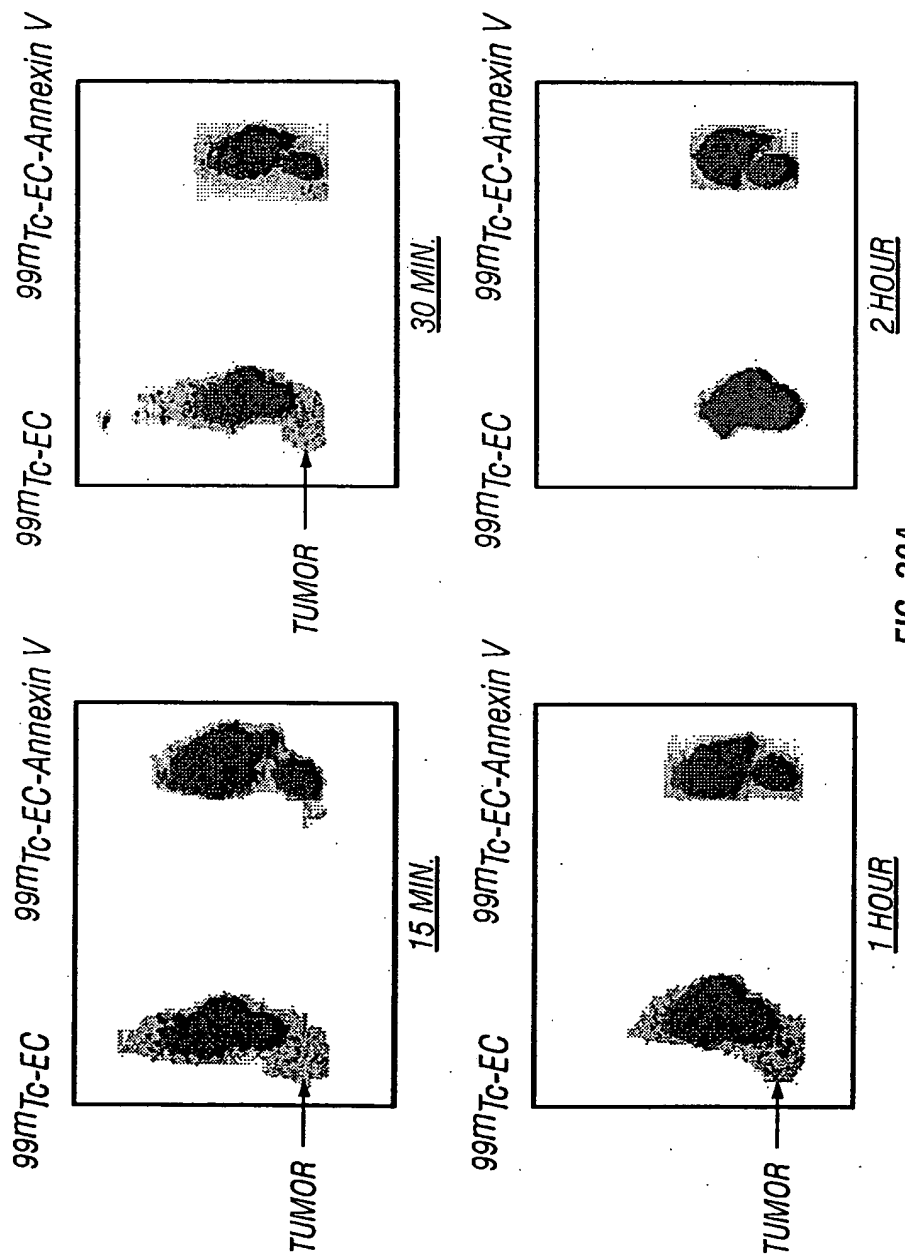


FIG. 20A

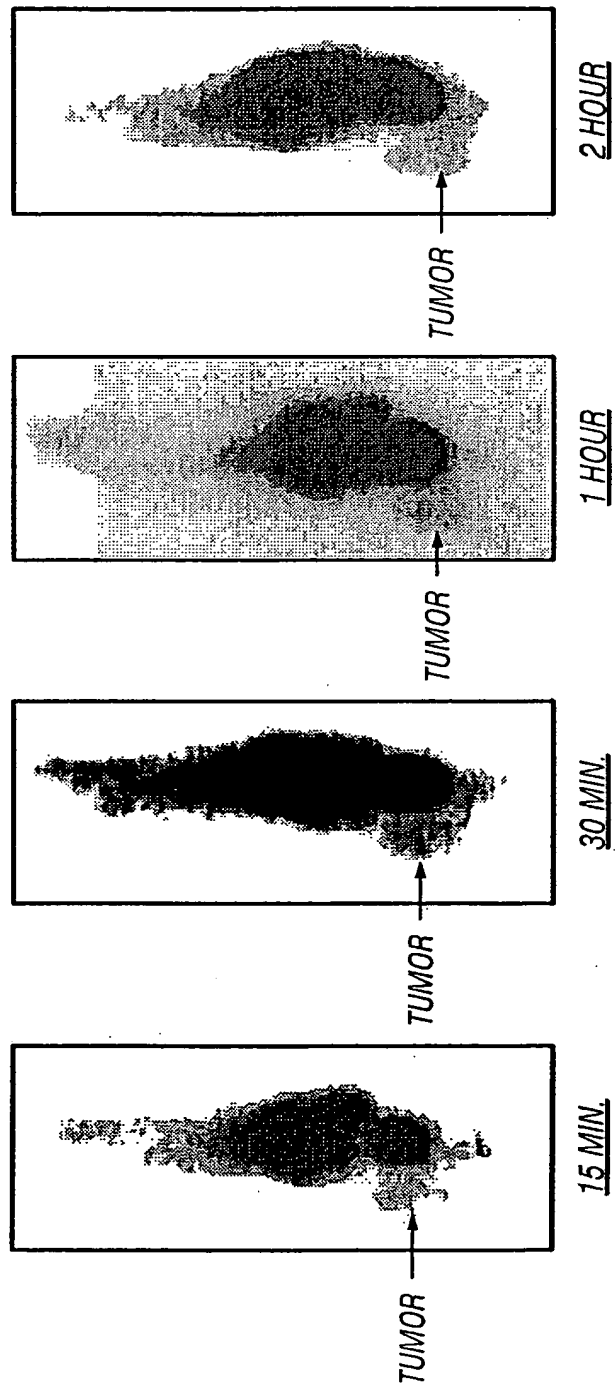


FIG. 20B

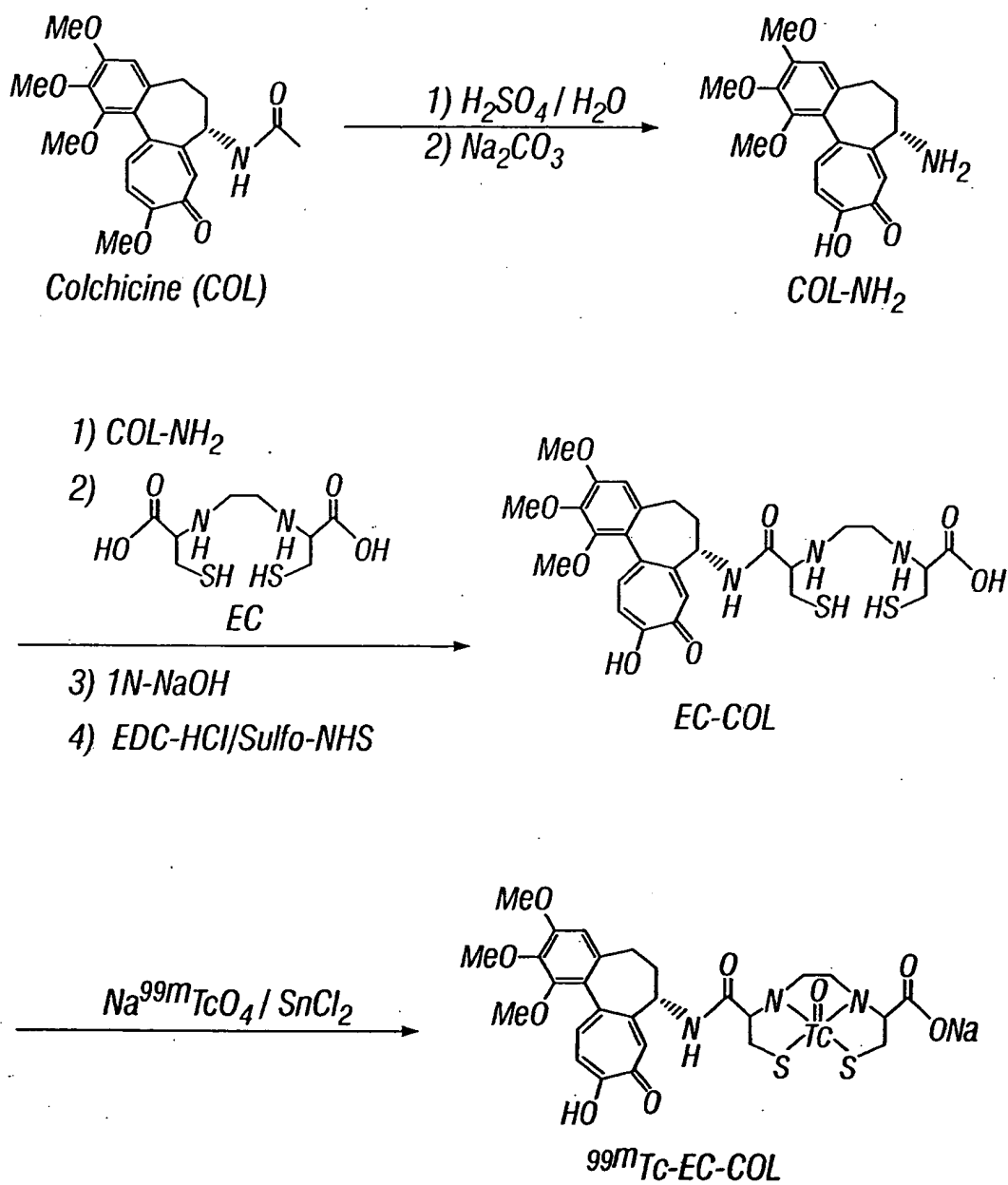


FIG. 21

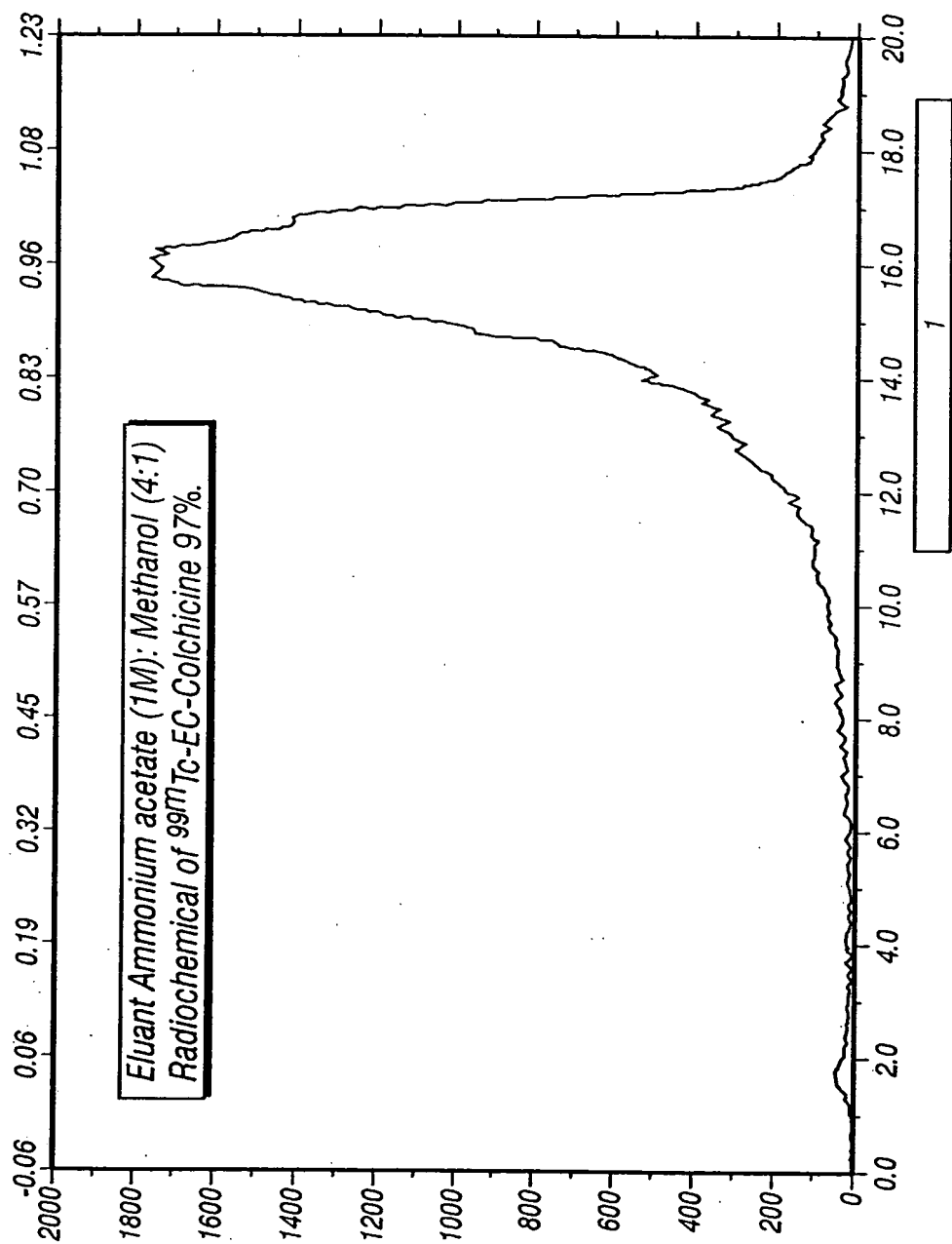


FIG. 22

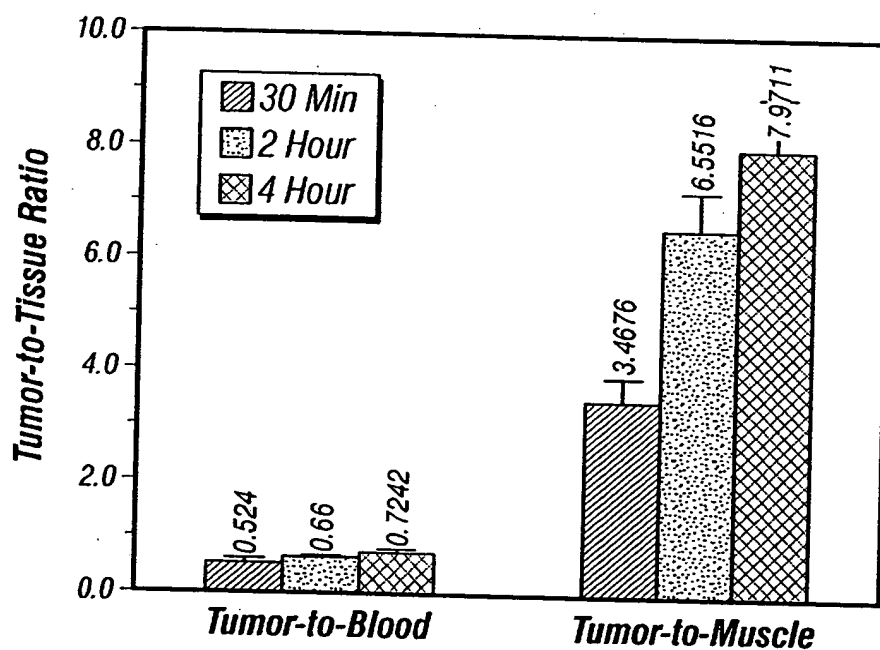


FIG. 23

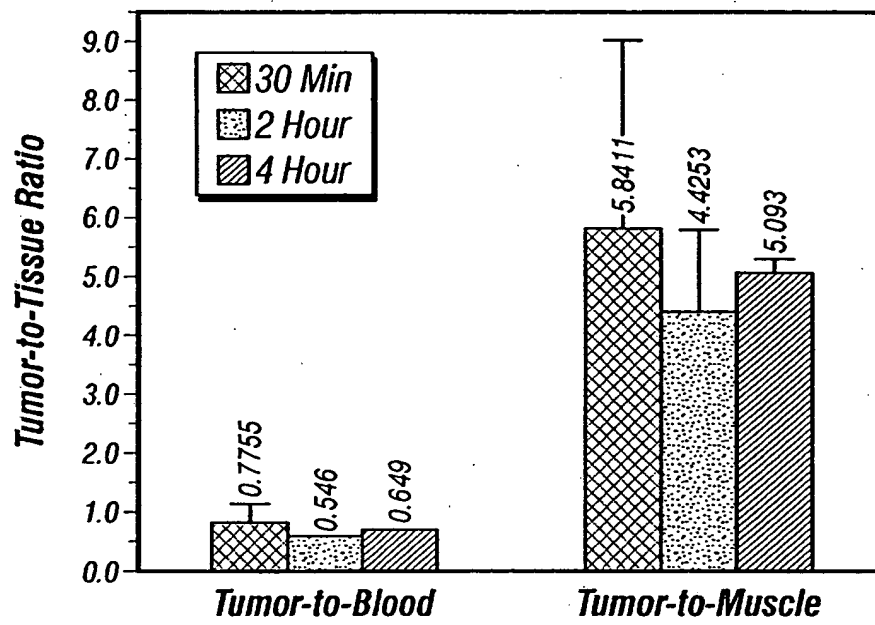
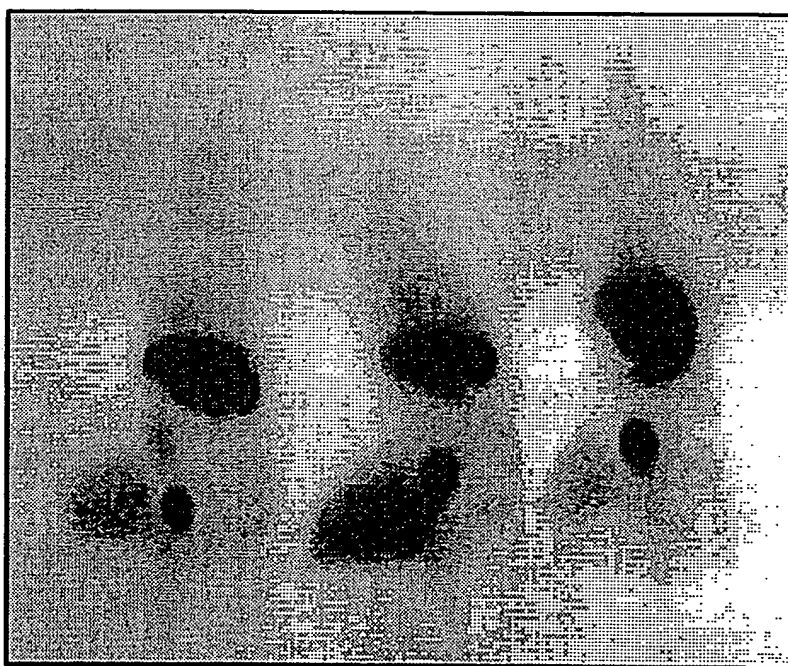
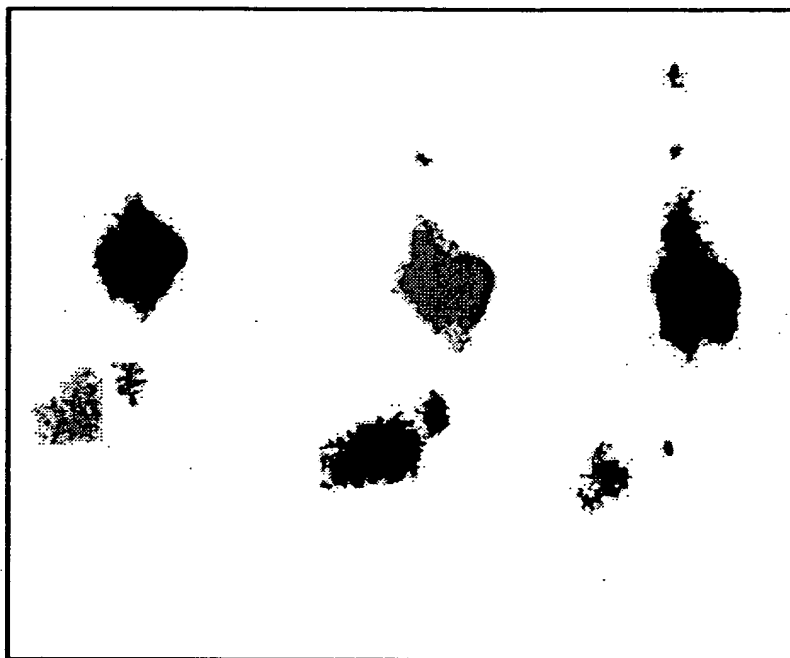


FIG. 24



**FIG. 25**



**FIG. 26**



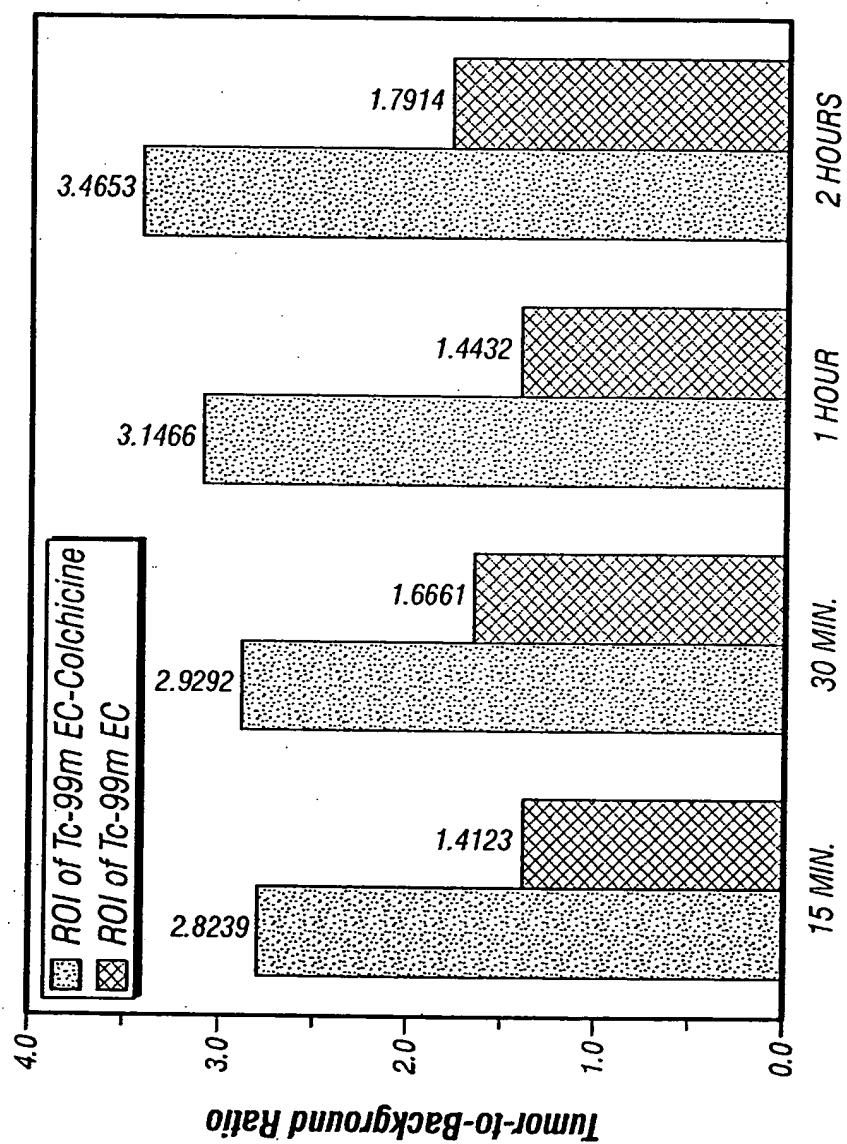
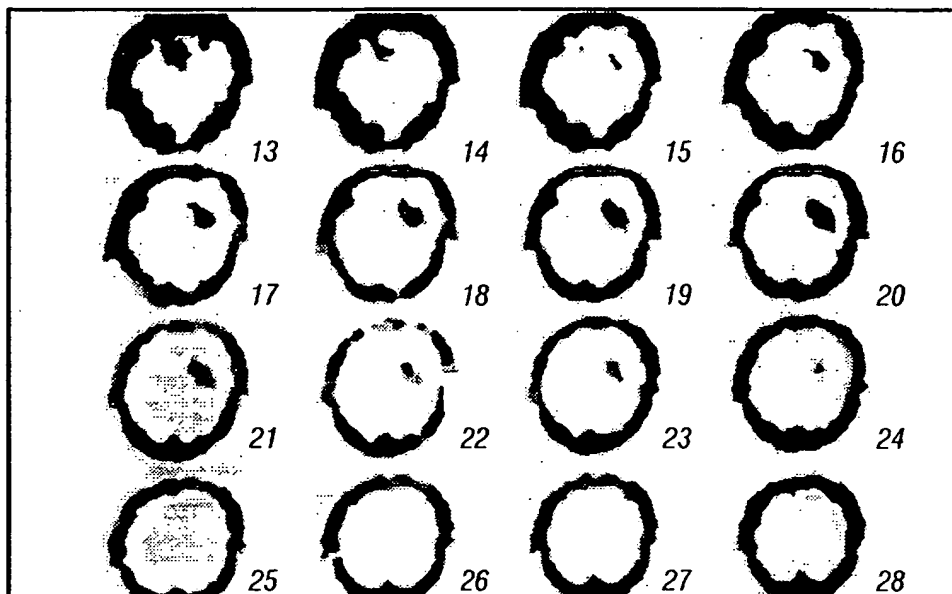


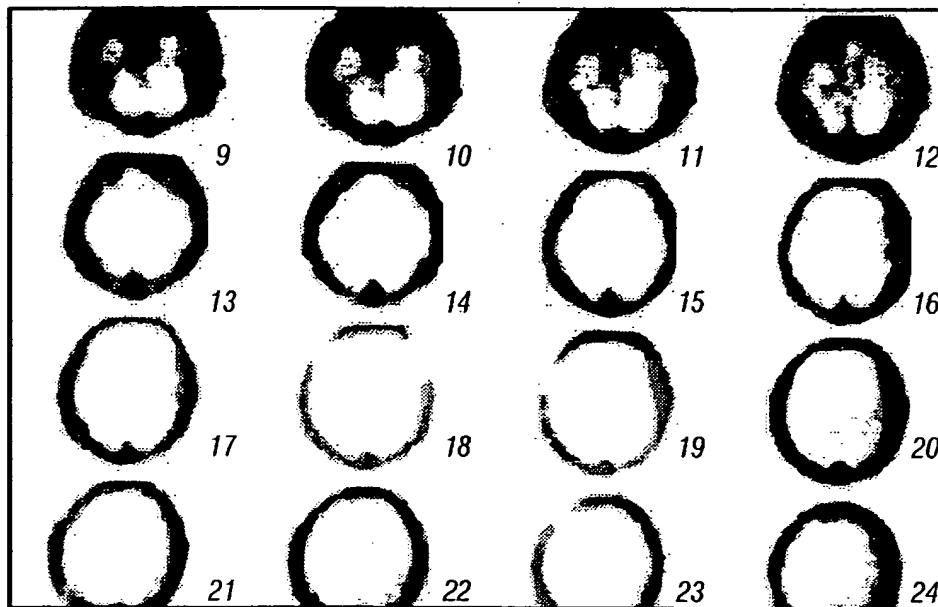
FIG. 27



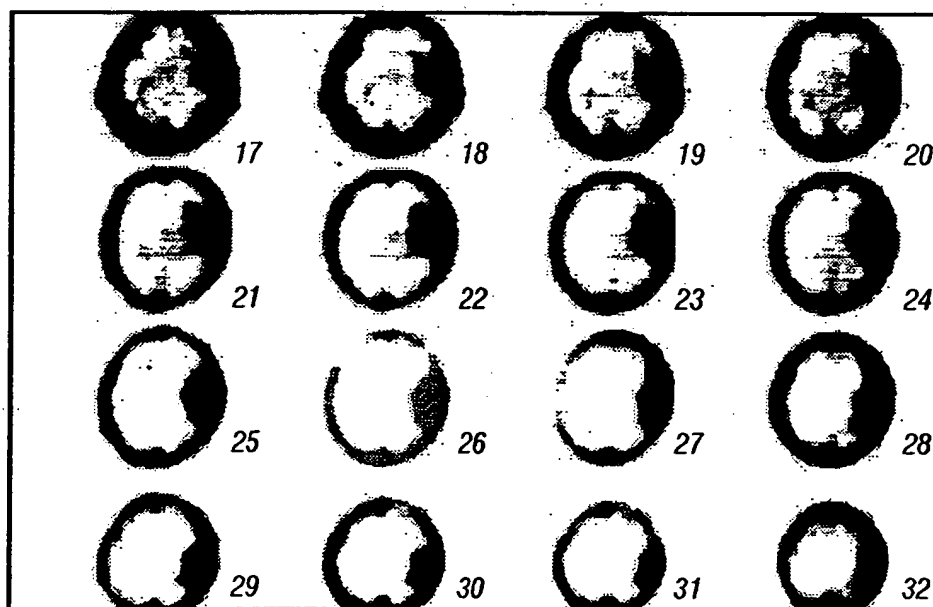
**FIG. 28**



**FIG. 29**



**FIG. 30**



**FIG. 31**

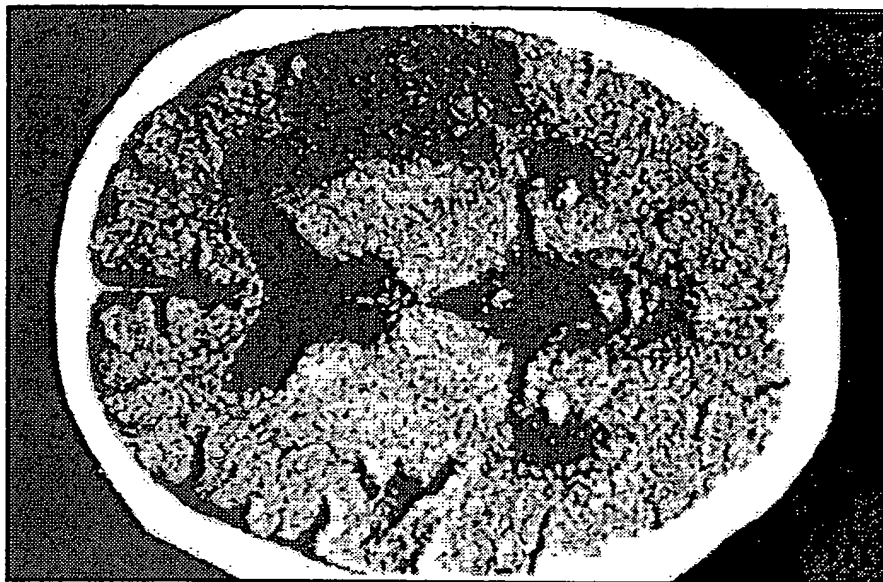


FIG. 33

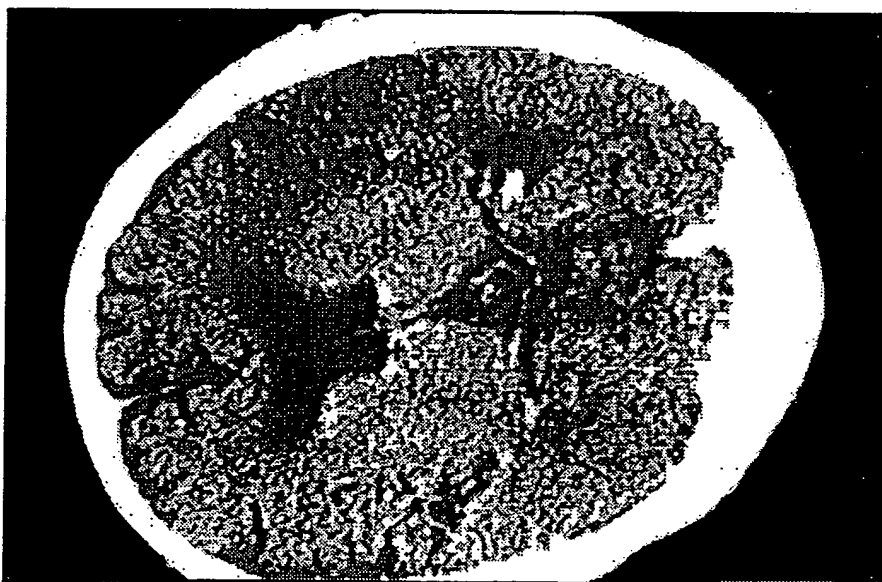
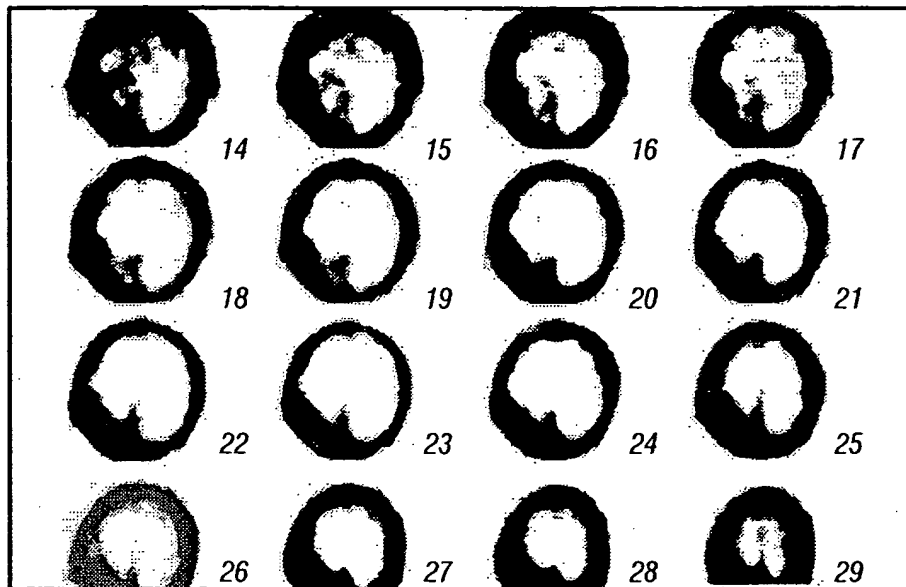


FIG. 32



**FIG. 34**



**FIG. 35**

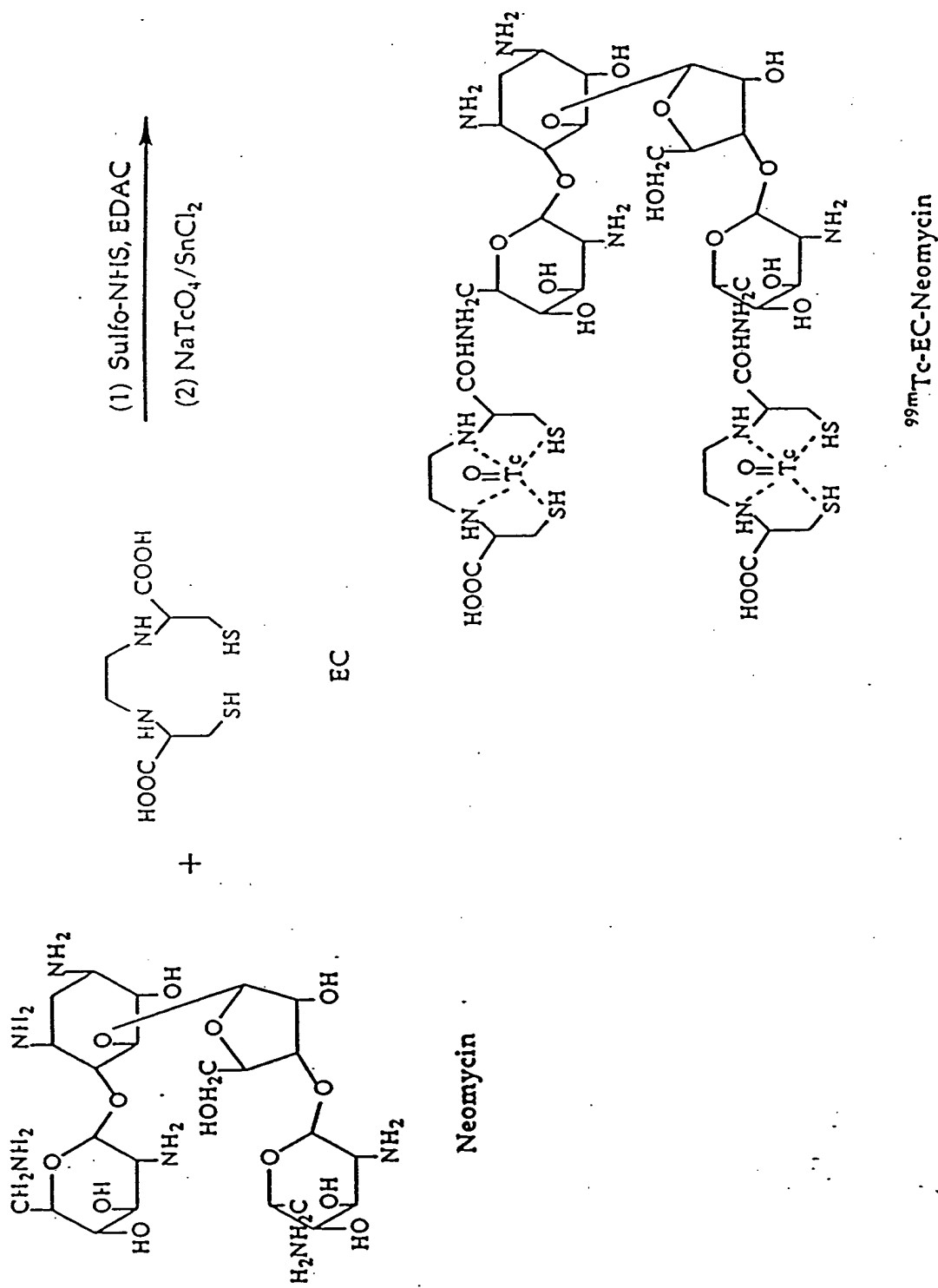
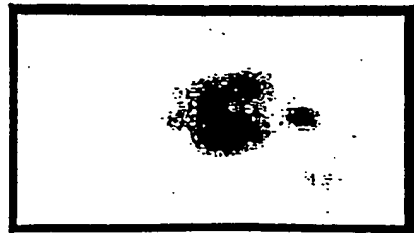


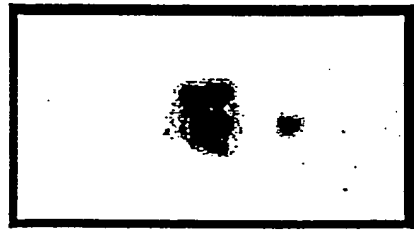
FIG. 36 Synthetic scheme of  $^{99\text{m}}\text{Tc-EC-neomycin}$ .

**$^{99m}\text{Tc-EC}$**

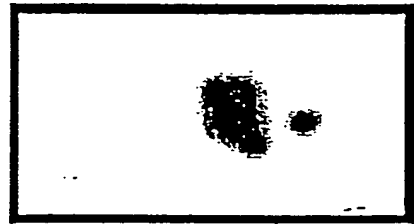
**$^{99m}\text{Tc-EC-Neomycin}$**



0.5



2



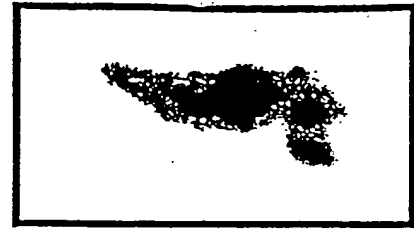
4hrs



0.5



2



4hrs

Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Neomycin}$  ( $100\mu\text{Ci/rat}$ , iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

**FIG. 37A**

Scintigraphic image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Neomycin}$  ( $100\mu\text{Ci/rat}$ , iv.) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

WOO IN JA

753717

2000

HONKWANG UNIV HOSP

SCINTIMAMMOGRAPHY EC-NEO

LT LAT-2H

RT LAT-2H

LT LAT-2H

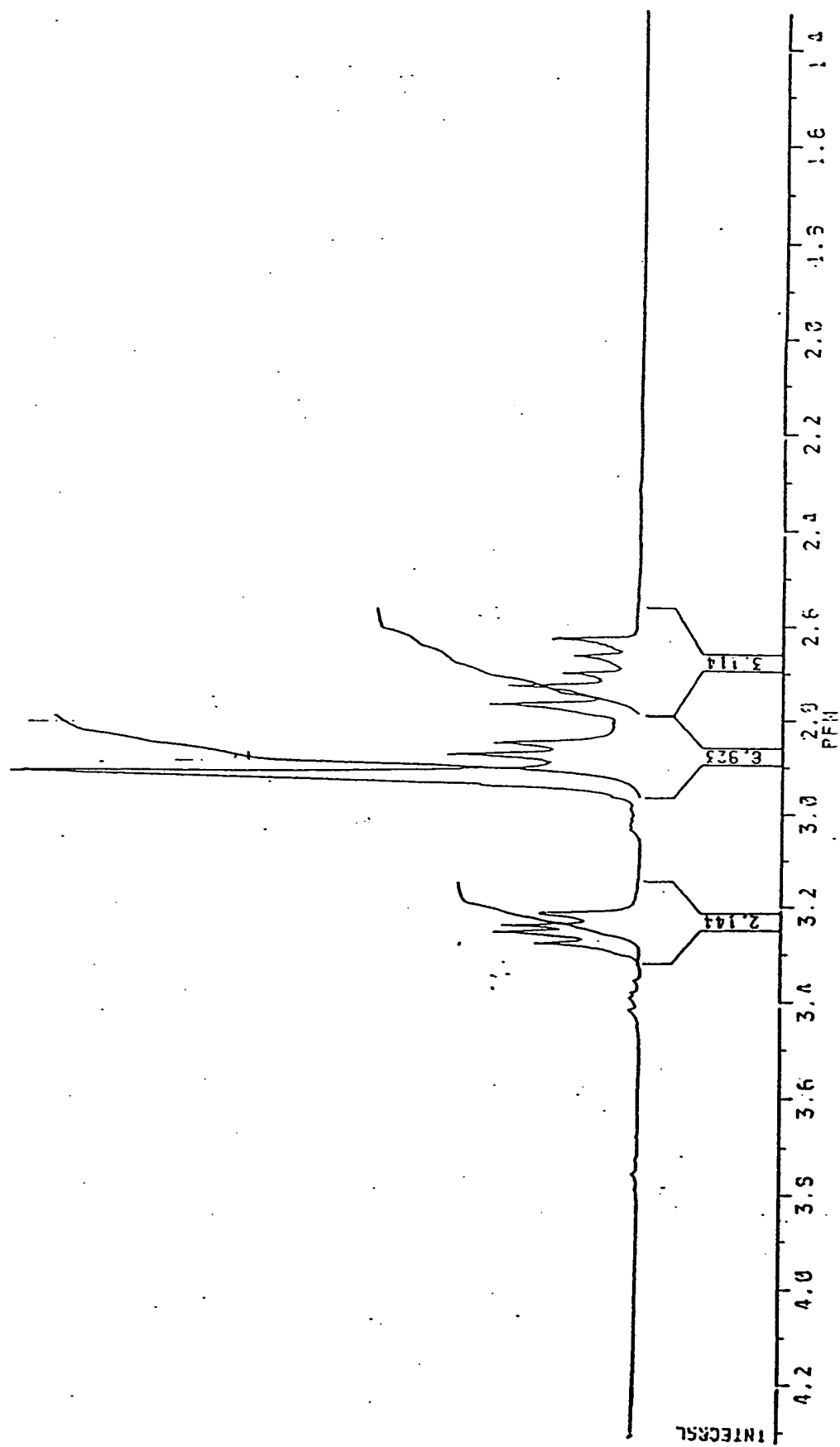
RT LAT-2H

FIG. 37B

Scintimammography with  $^{99m}\text{Tc}$ -EC- neomycin (30 mCi, iv.) of a breast cancer patient. Images taken two hours post-injection.



EC



<sup>1</sup>H-NMR of EC.

FIG. 38A

Neomycin

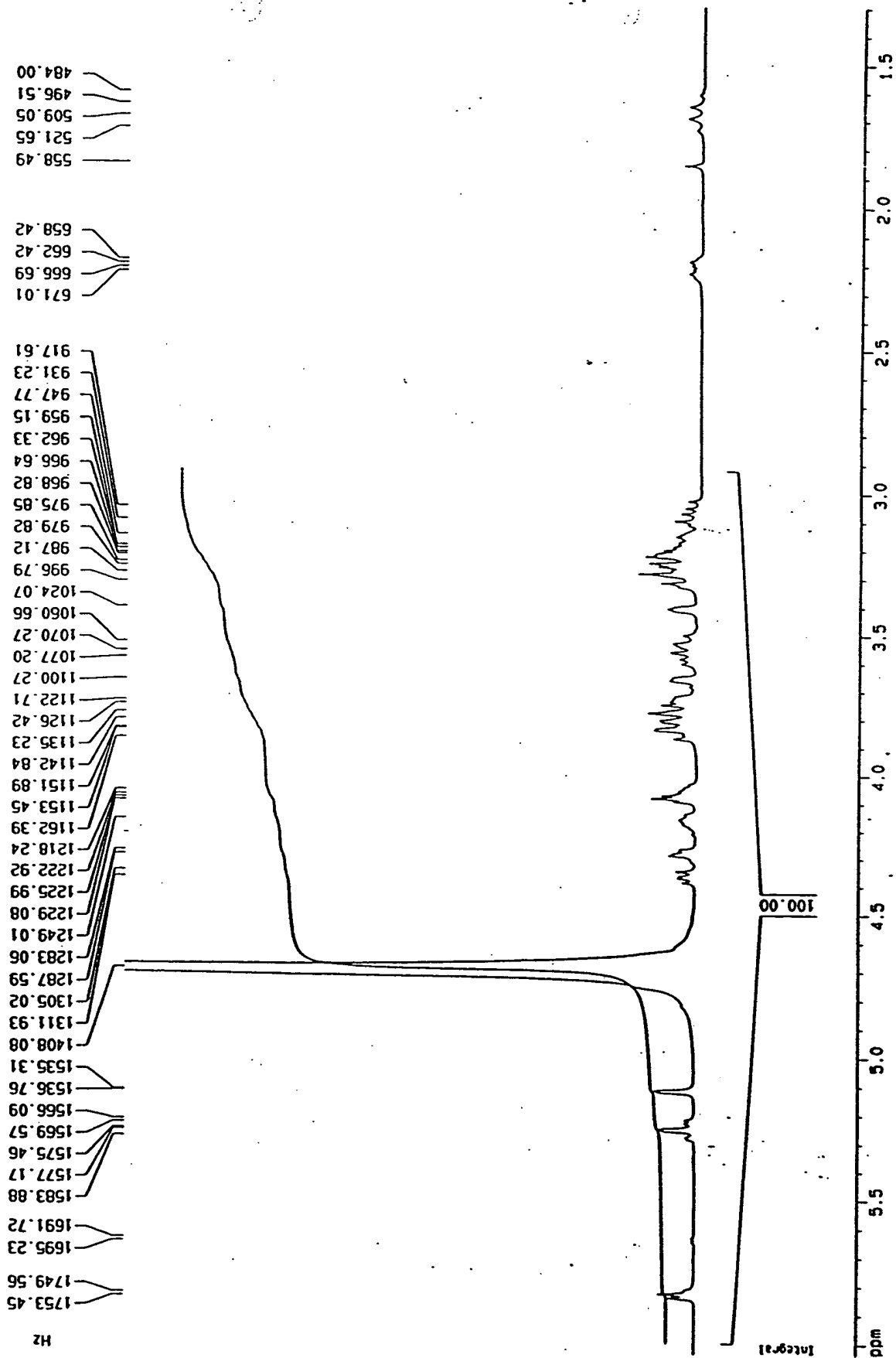
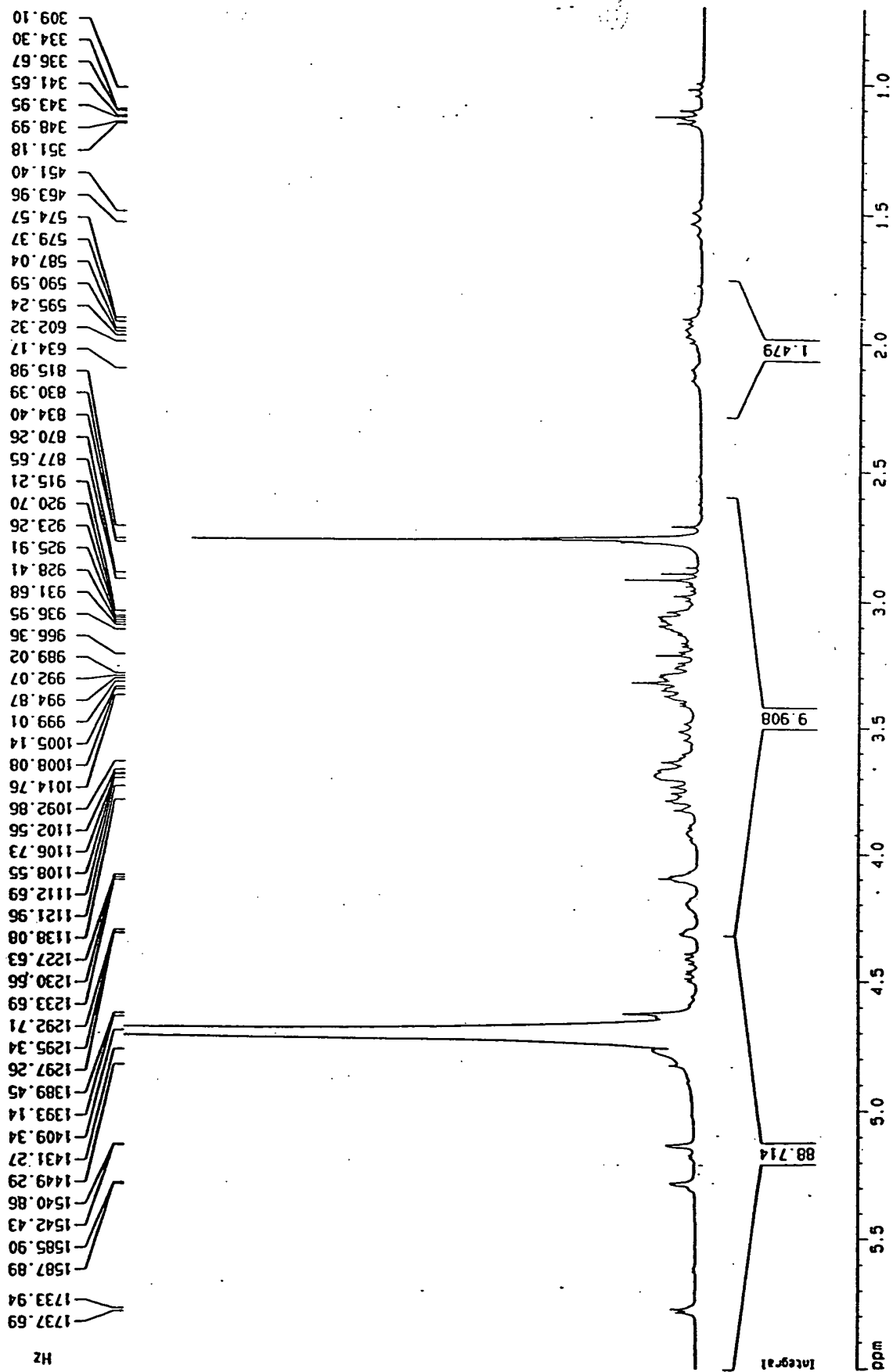


FIG. 38B <sup>1</sup>H-NMR of neomycin.

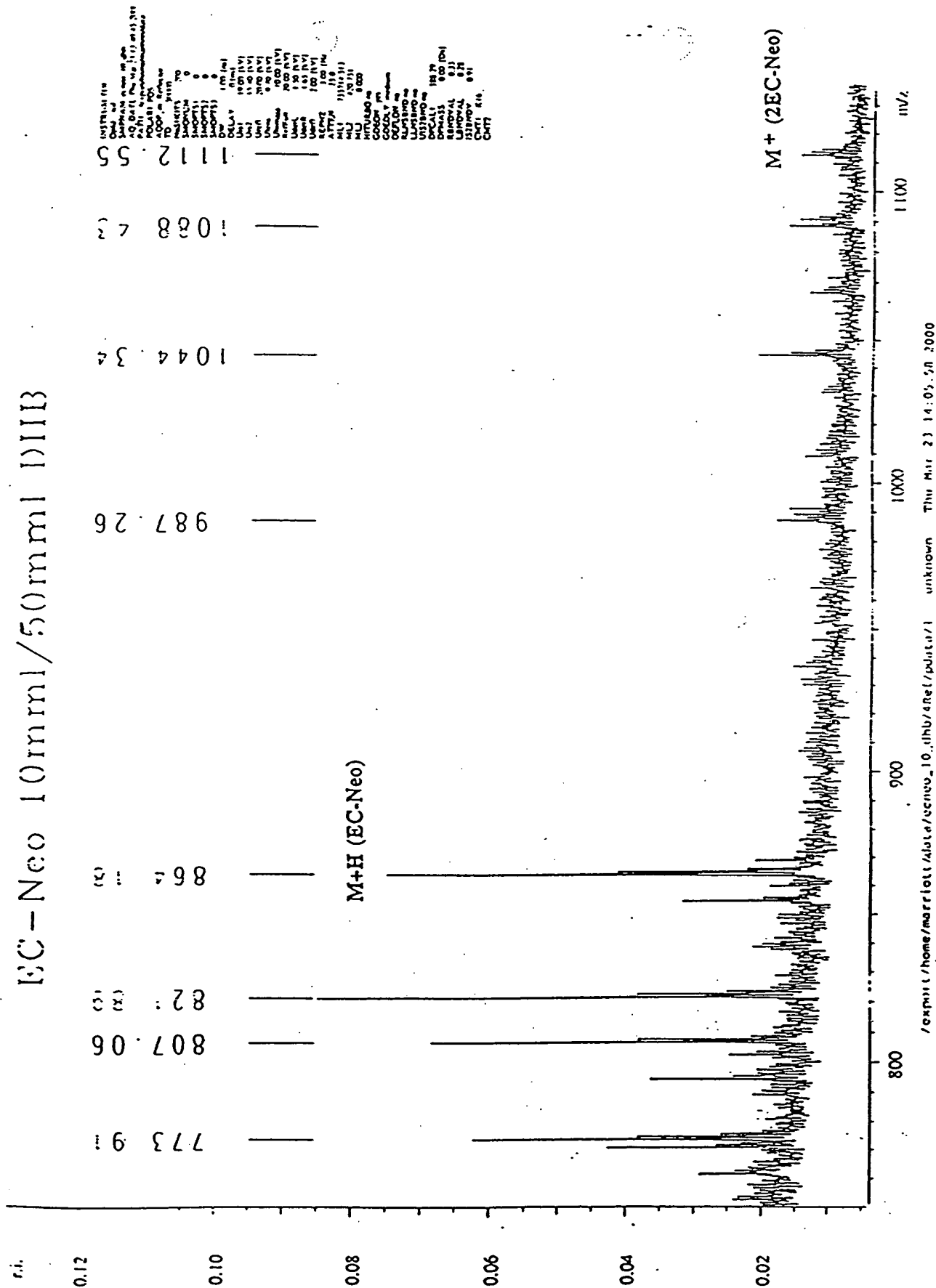
EC-Neomycin



<sup>1</sup>H-NMR of EC-neomycin.

FIG. 38C

# EC-Neo 10mm/50mm DIII



Mass spectrometry of EC-neomycin ( $M^+$  1112.55).

FIG. 39

## UV Wavelength Scan of EC

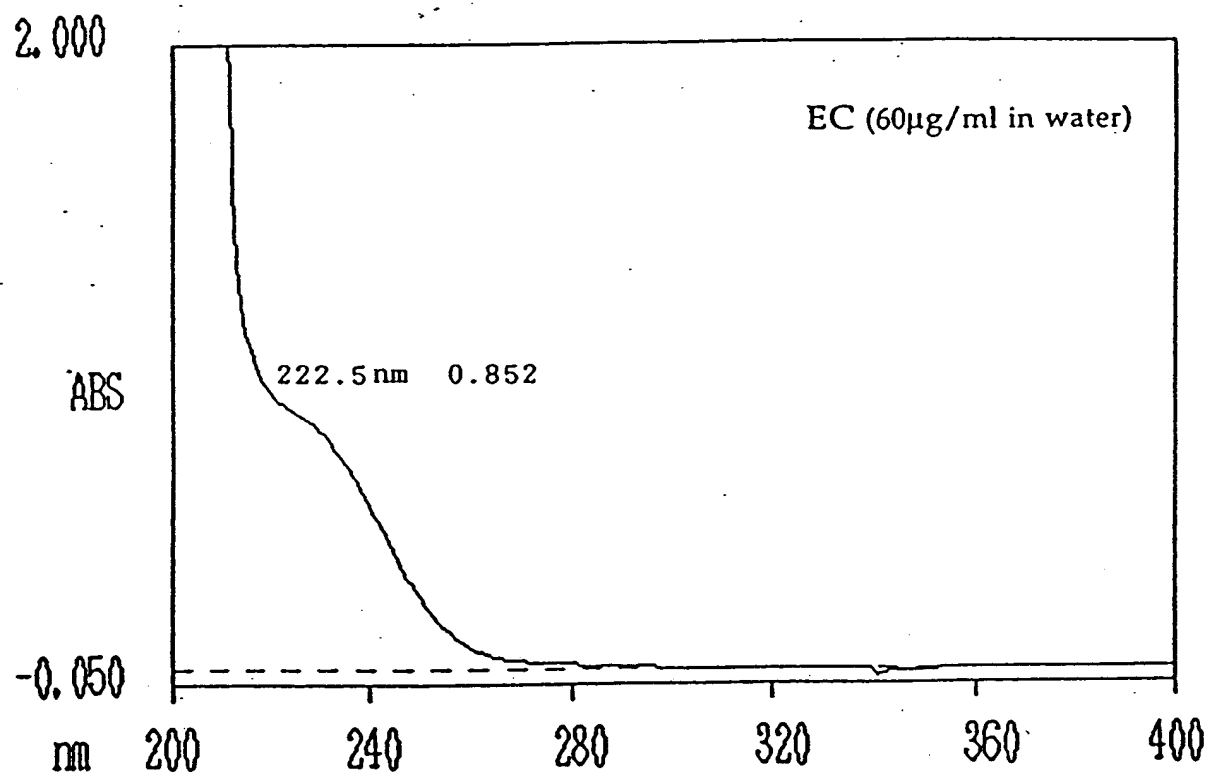


FIG. 40A

UV wavelength scan of EC.

## UV Wavelength Scan of Neomycin

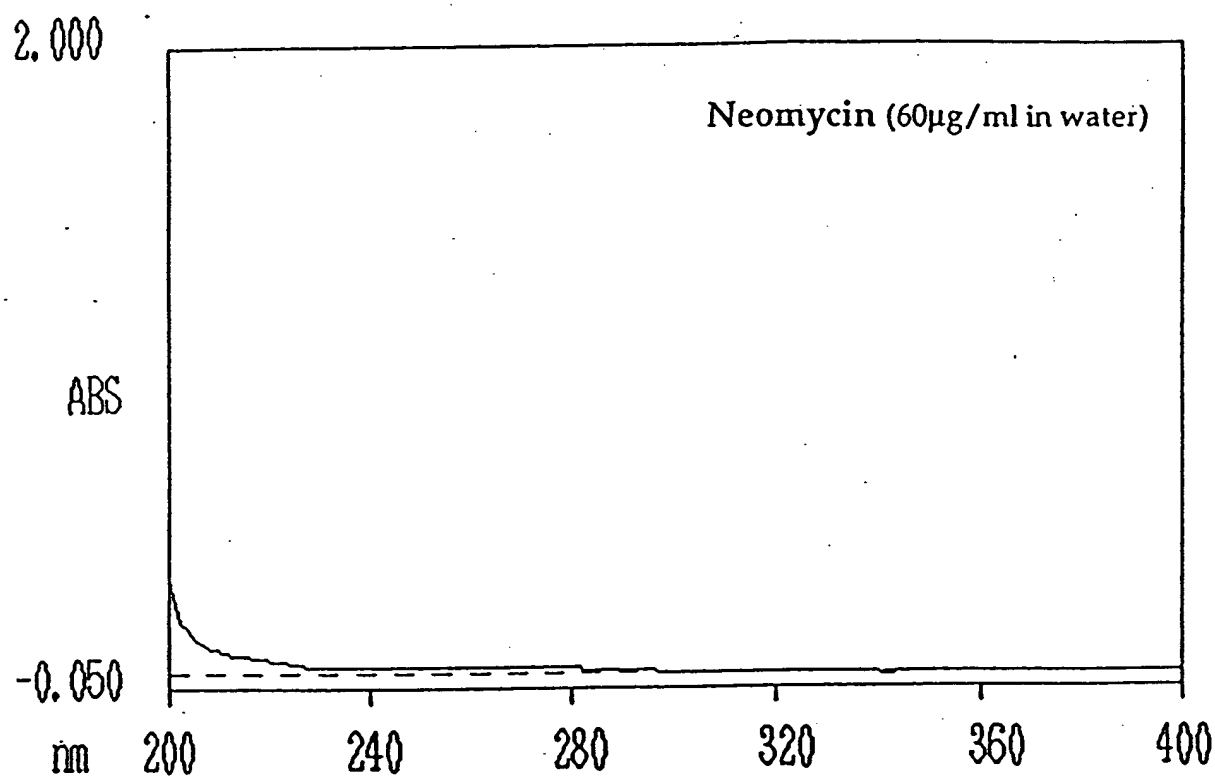


FIG. 40B

UV wavelength scan of neomycin.

## UV Wavelength Scan of EC-Neomycin

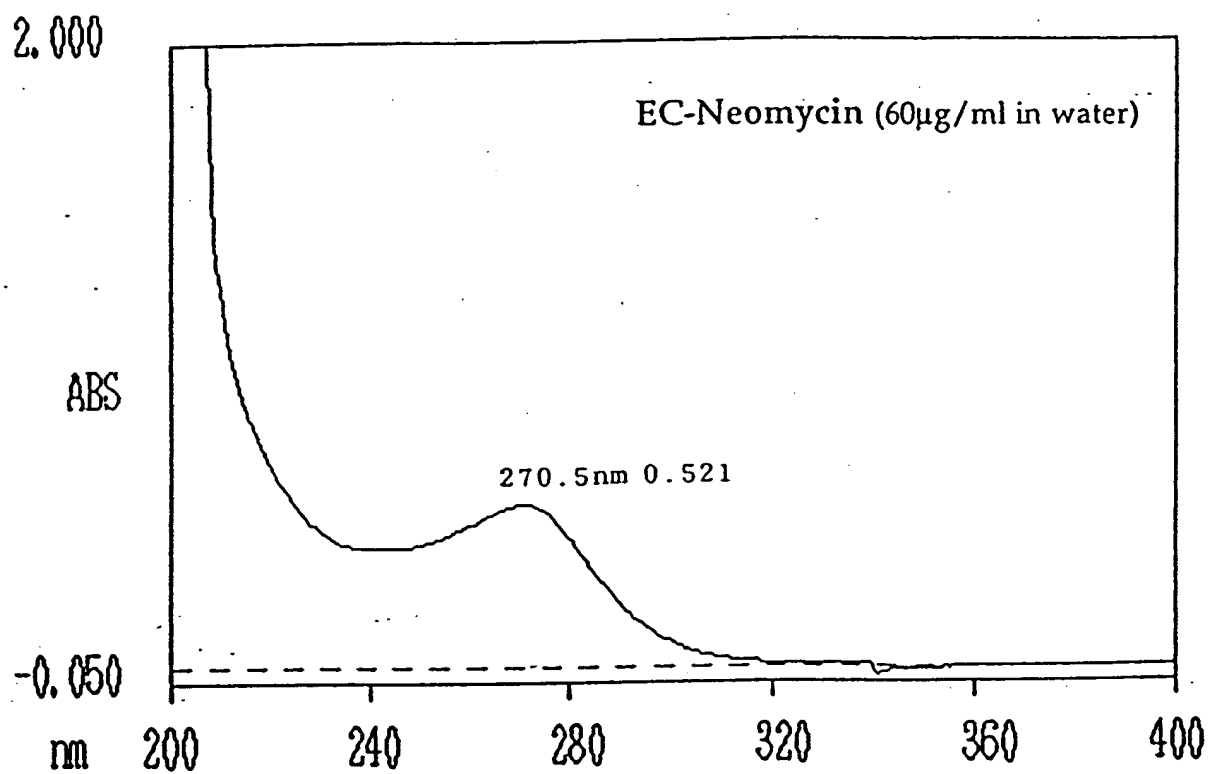


FIG. 40C

UV wavelength scan of EC-neomycin.

EC-NEOMYCIN 30mg + EC

# SUMMARY REPORT

Tc-99m

METHANOL-AMMONIUM ACETATE

Date: Feb 03 2000

Start time: 12:45

Accum time: 00:03:01

Data File:

Plate: 1 Lane: 1

Elect Resolution: NORMAL

(Amp. Range: 0 - 2047)

Rf Calculations: Origin: 0.00 cm

Solvent Front: 20.00 cm

Integration Parameters: Auto Integration

Peak slope: 1.0

Min width: 0.1

Min %: 2.0

Total Count Region: 0.00cm to 20.00cm

Total Counts: 48360

Total CPM: 16030

Reg. #	Start (cm)	Stop (cm)	Center (cm)	Rf	Region Counts	Region CPM	% of Tot Reg	% of Tot Cnt
1	6.50	14.90	10.57	0.53	45000	14920	100.00	93.05
TOTAL					45000	14920	100.00	93.05

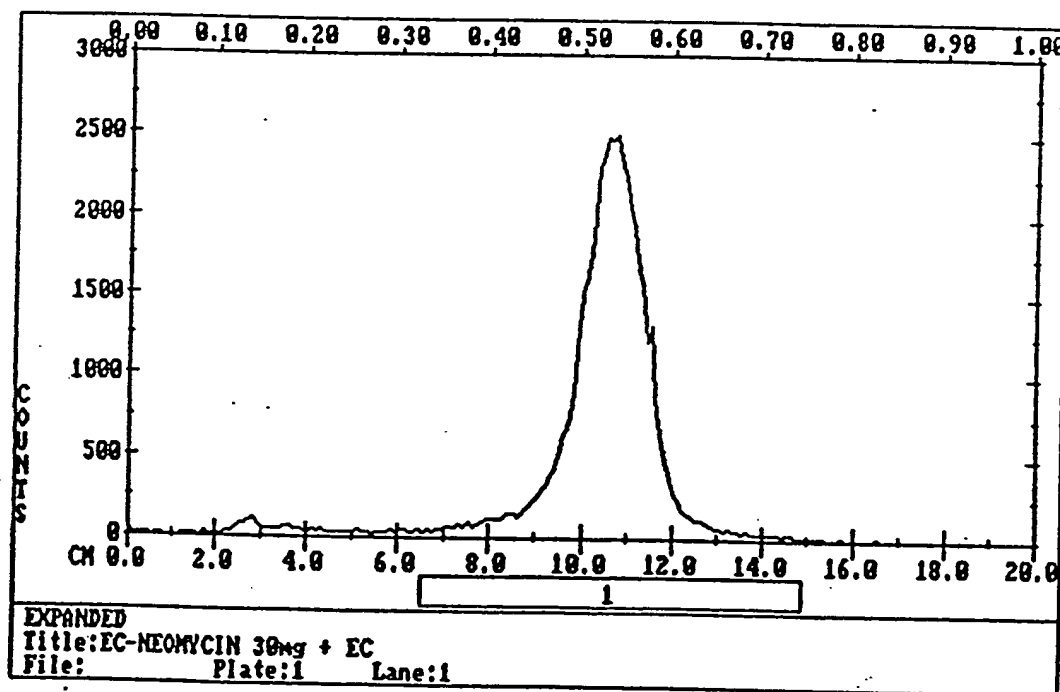
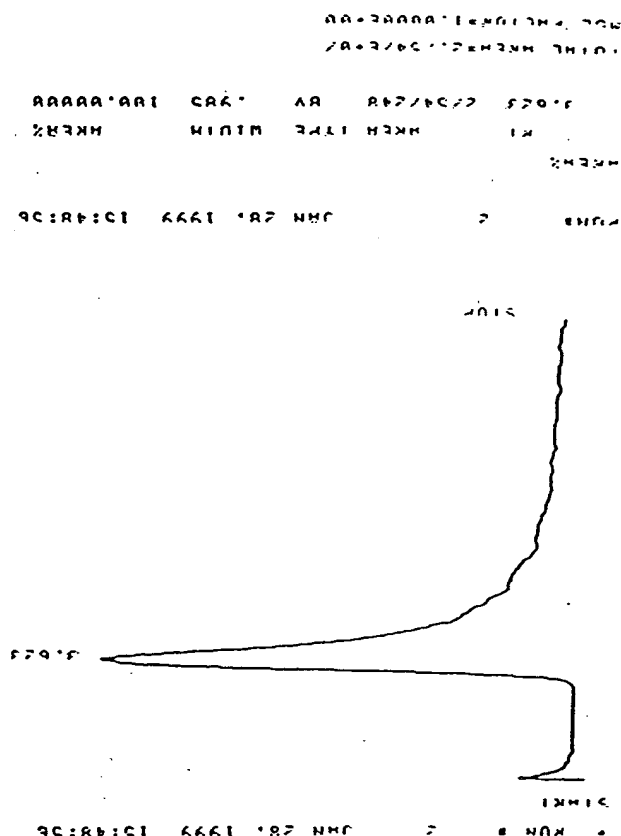


FIG. 41

Radio-TLC analysis of <sup>99m</sup>Tc-EC-neomycin.



## Temp: 85.0°C



**FIG. 42**  
HPLC analysis of  $^{99m}\text{Tc}$ -EC-neomycin (radioactive detector).

<sup>99m</sup>Tc-EC-NEO

Column: Bio-Rad Carbohydrate, Aminex HPLX-87C, 250x4mm

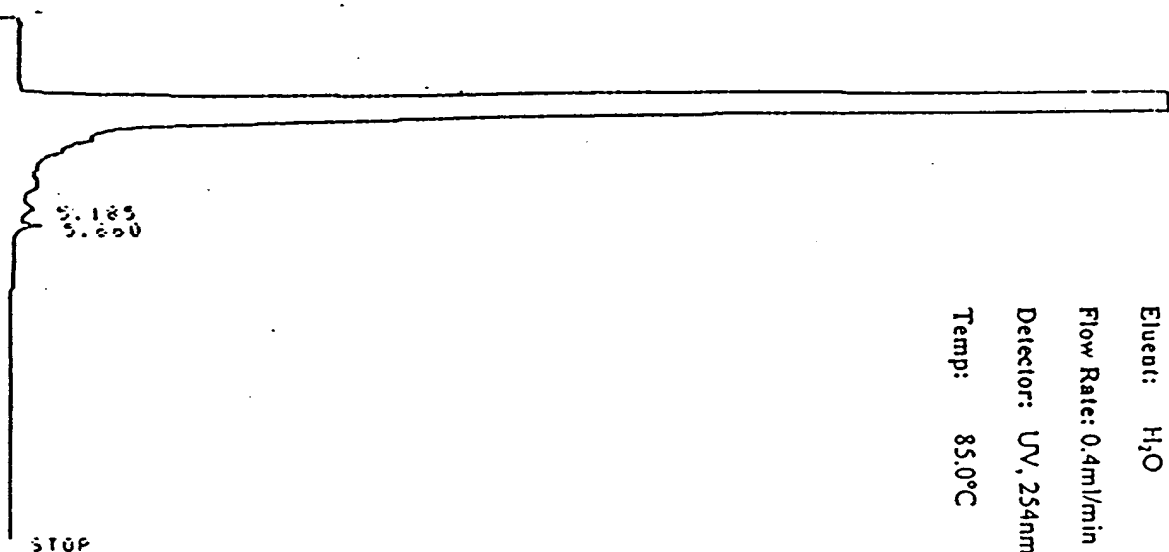
Eluent: H<sub>2</sub>O

Flow Rate: 0.4ml/min

Detector: UV, 254nm

Temp: 85.0°C

RUN # 2 JAN 28, 1999 00:54:29  
START



RUN # 2 JAN 28, 1999 00:54:29

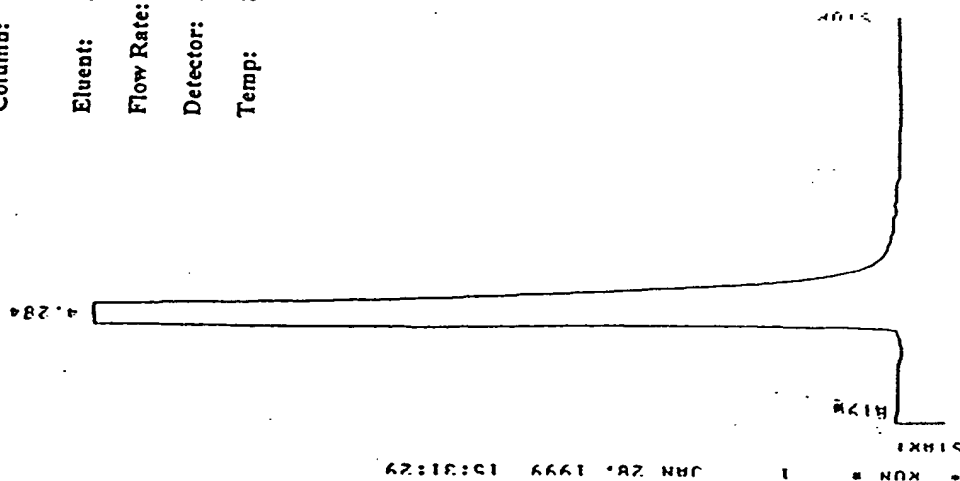
RT	AREA	TYPE	WIDTH	AREA%
2.315	99711.65	SPH	.498	99.71165
5.125	3926.04	BY	.265	.15126
5.260	3559.01	VB	.132	.13712

TOTAL AREA=2.5955E+03

NO. FACTOR=1.0000E+00

<sup>18</sup>F-FDG

Column: Bio-Rad Carbohydrate,  
Aminex HPX-87C, 250x4mm  
Eluent: H<sub>2</sub>O  
Flow Rate: 0.4ml/min  
Detector: Radiochemical  
Temp: 85.0°C



\*\*\*\*\*  
JAN 28 1999 15:31:29  
KUN # 1  
AREA 188.1204  
AREA TYPE MIN  
\*\*\*\*\*

\*\*\*\*\*  
JAN 28 1999 15:31:29  
KUN # 1  
AREA 188.1204  
AREA TYPE MIN  
\*\*\*\*\*

FIG. 44 HPLC analysis of <sup>18</sup>F-FDG (radioactive detector).

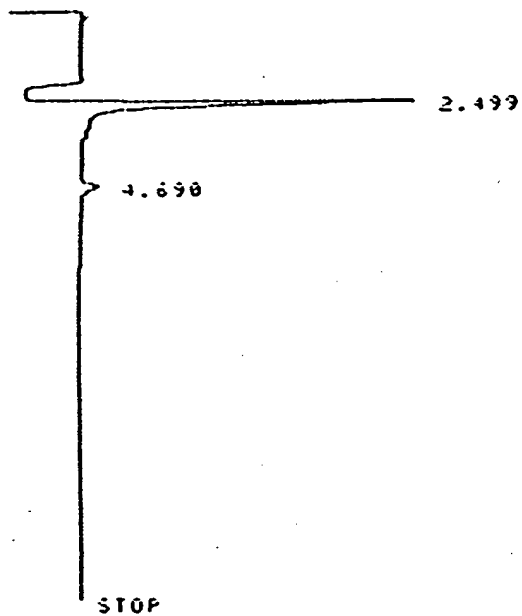
<sup>18</sup>F-FDG

• DATE 1/28/99  
JAN 28. 1999 00:16:15

• CH1 SP 1.5 @  
• ATT 2 @ @  
• THRESH 7 @  
• LIST: LIST  
PEAK CAPACITY: 1244

ZERO = 0. -11.179  
ATT 2 = 0  
CH1 SP = 0.5  
NR REJ = 0  
THRESH = 7  
PR MD = 0.04

• RUN # 1 JAN 28. 1999 00:37:02  
START



RUN# 1 JAN 28. 1999 00:37:02

Column: Bio-Rad Carbohydrate,  
Aminex HPX-87C, 250x4mm

Eluent: H<sub>2</sub>O

Flow Rate: 0.4ml/min

Detector: UV, 254nm

Temp: 85.0°C

FIG. 45

HPLC analysis of <sup>18</sup>F-FDG (UV 254 nm).

# % of Drug Uptake In Lung Cancer Cell Line (A549)

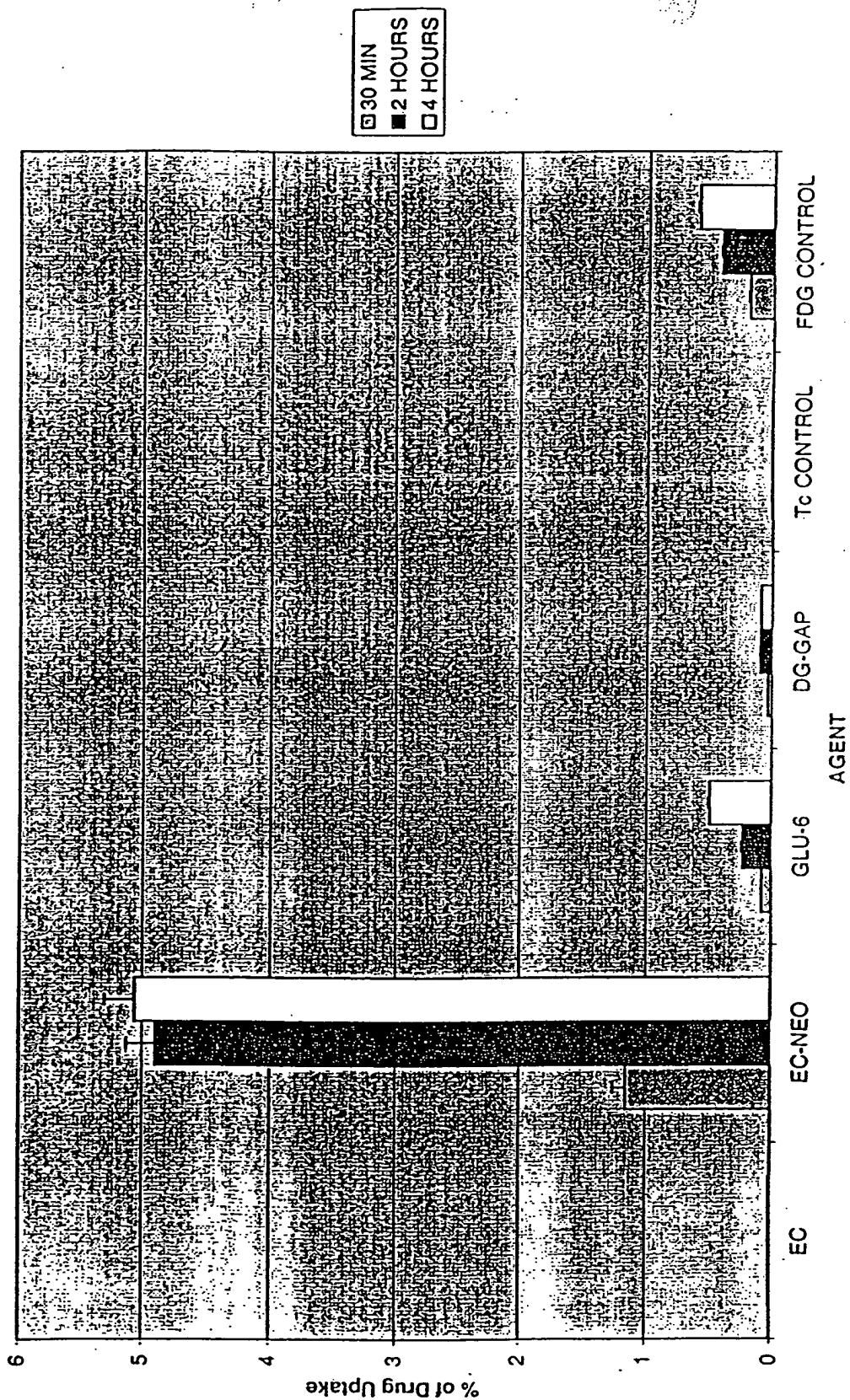


FIG. 46  
In vitro cellular uptake assay of a series of  $^{99m}\text{Tc}$ -EC-drug conjugates in lung cancer cell line.  $^{99m}\text{Tc}$ -EC- neomycin showed

the highest uptake in the samples tested

# % of Drug Uptake in Human Lung Cancer Cell Line (A549)

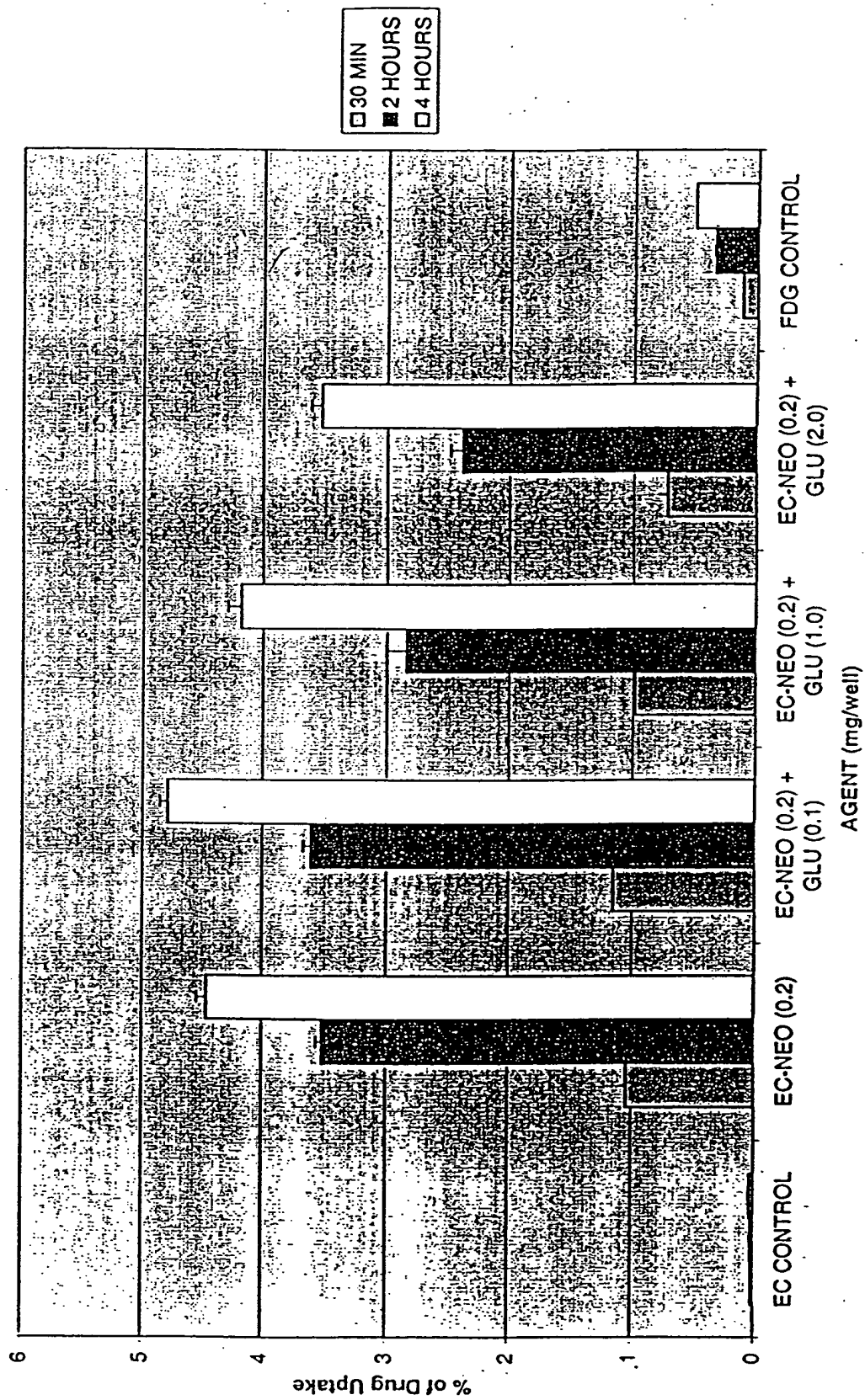
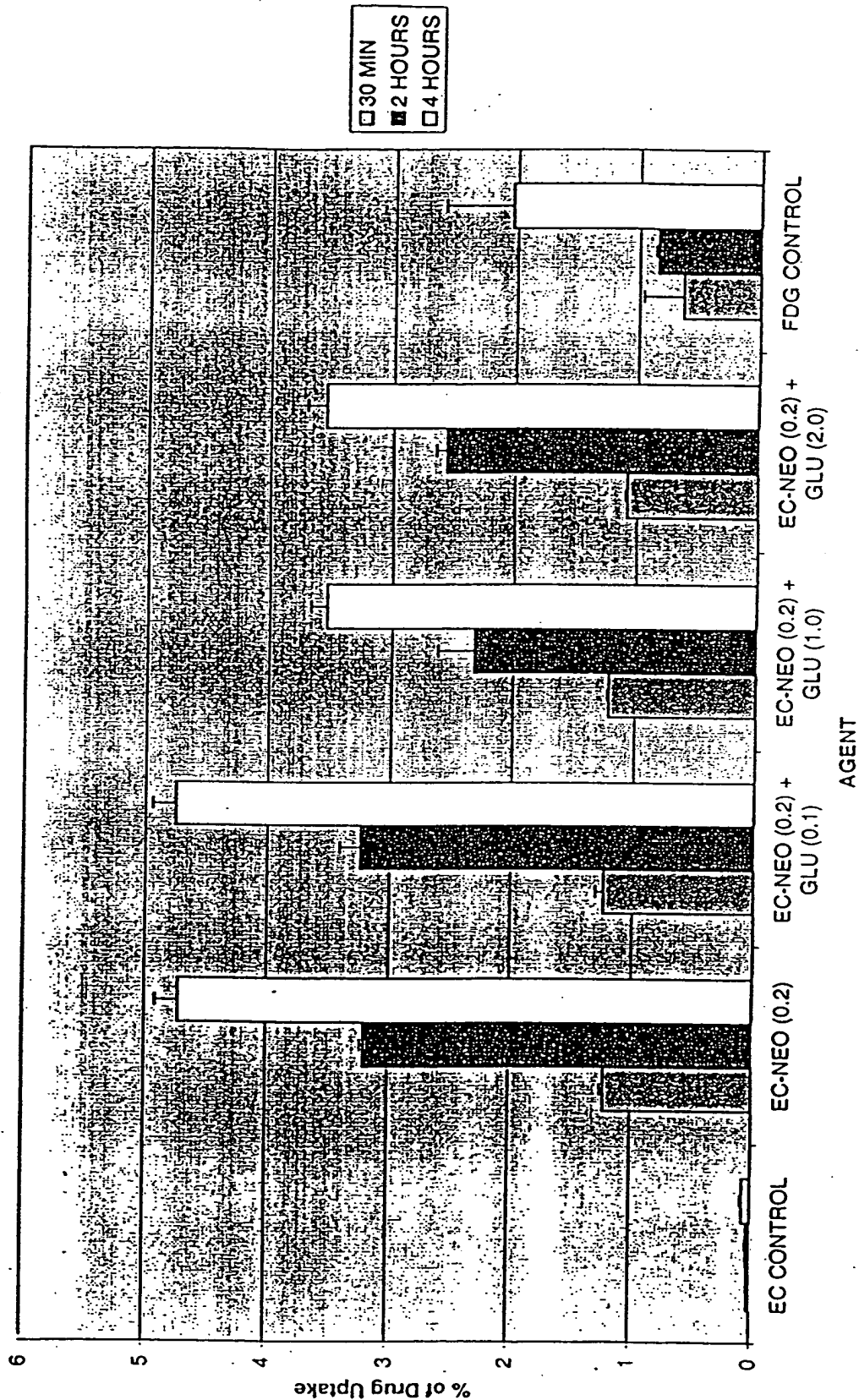


FIG. 47  
Effect of glucose on cellular (A549) uptake of  $^{99m}\text{Tc}$ -EC-neomycin and  $^{18}\text{F}$ -FDG.

# % of Drug Uptake in Human Lung Cancer Cell Line (H1299)



Effect of glucose on cellular (H1299) uptake of  $^{99m}\text{Tc}$ -EC-

FIG. 48A

Effects of Glucose Loading on  $^{99m}\text{Tc}$ -EC-Neomycin In Human Lung Cancer Cell Line (H1299)

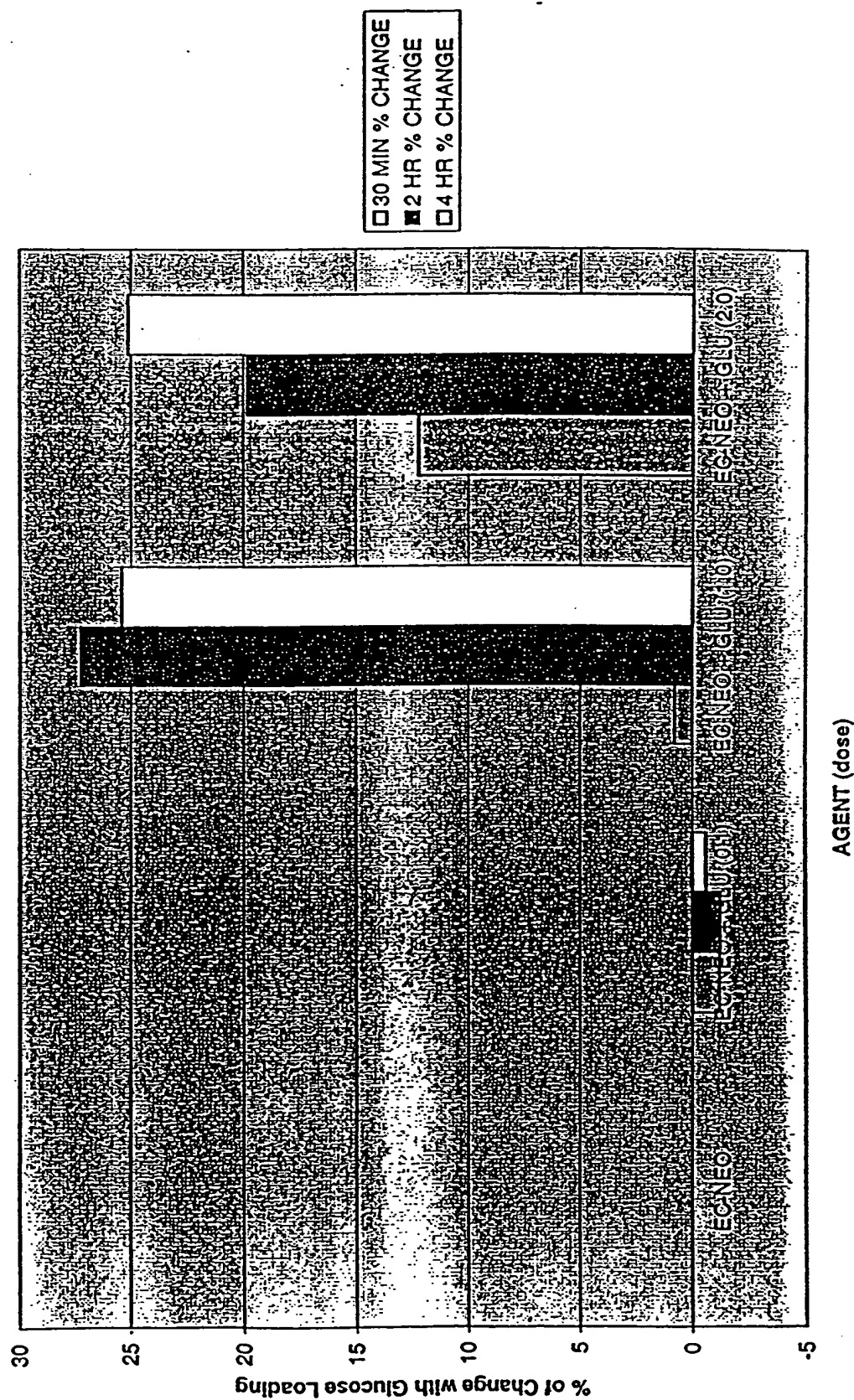


FIG. 48B



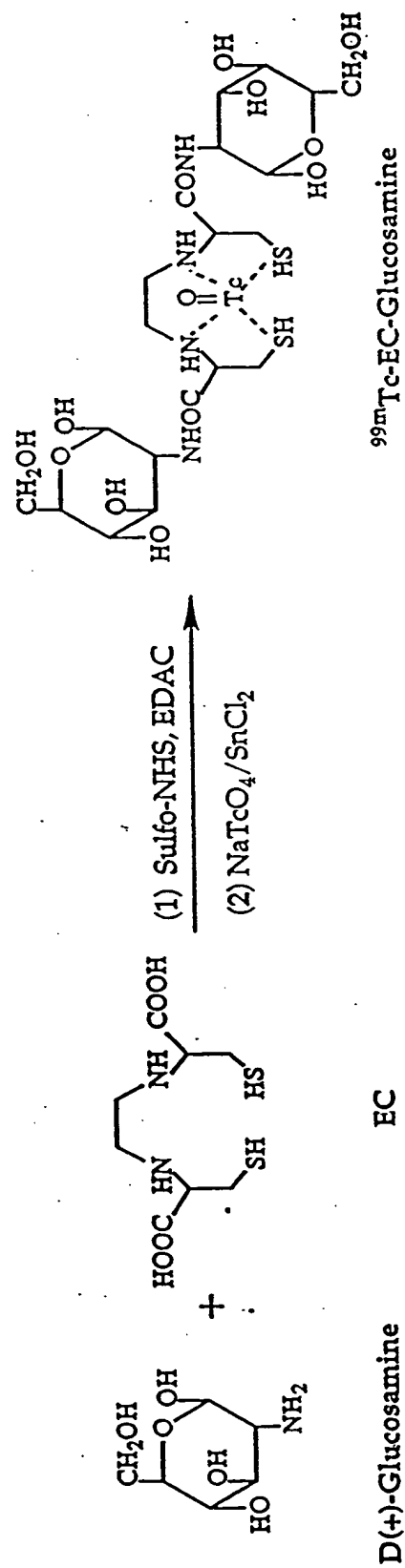
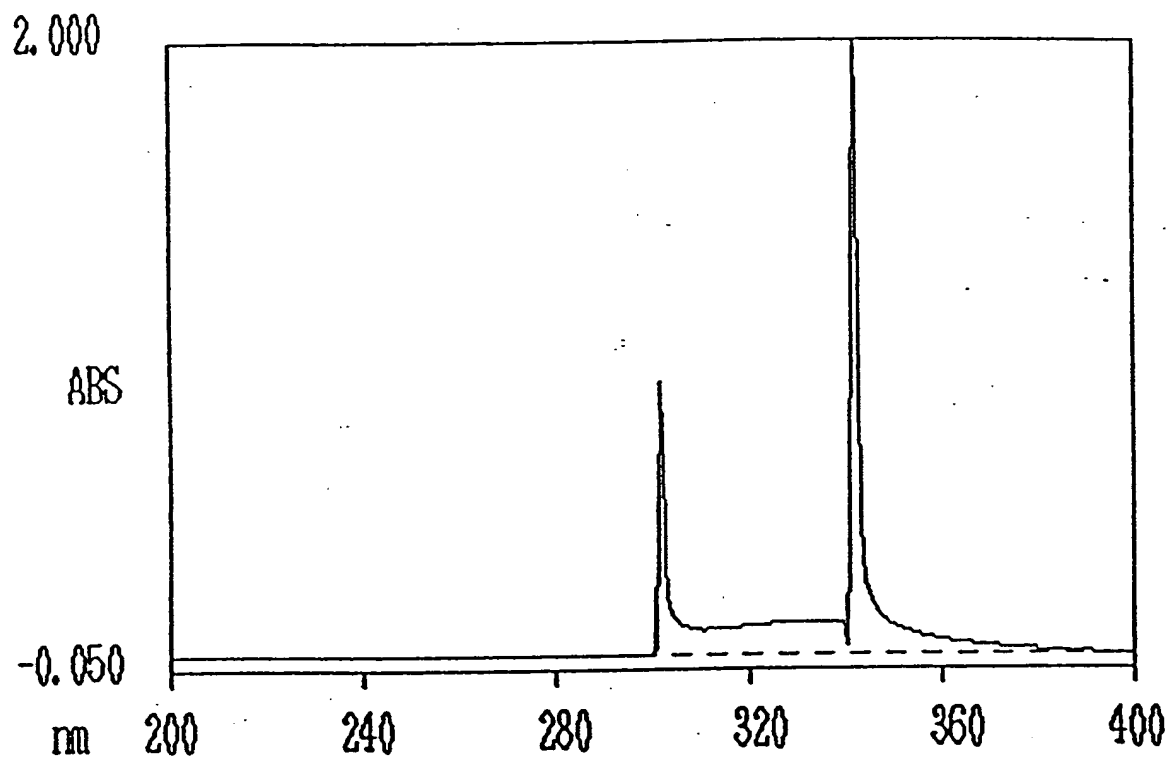


FIG. 49      Synthesis of  $^{99\text{m}}\text{Tc-EC-Glucosamine}$

## Hexokinase Assay of Glucose

WAVELENGTH SCAN/0

03/01/00 14:41



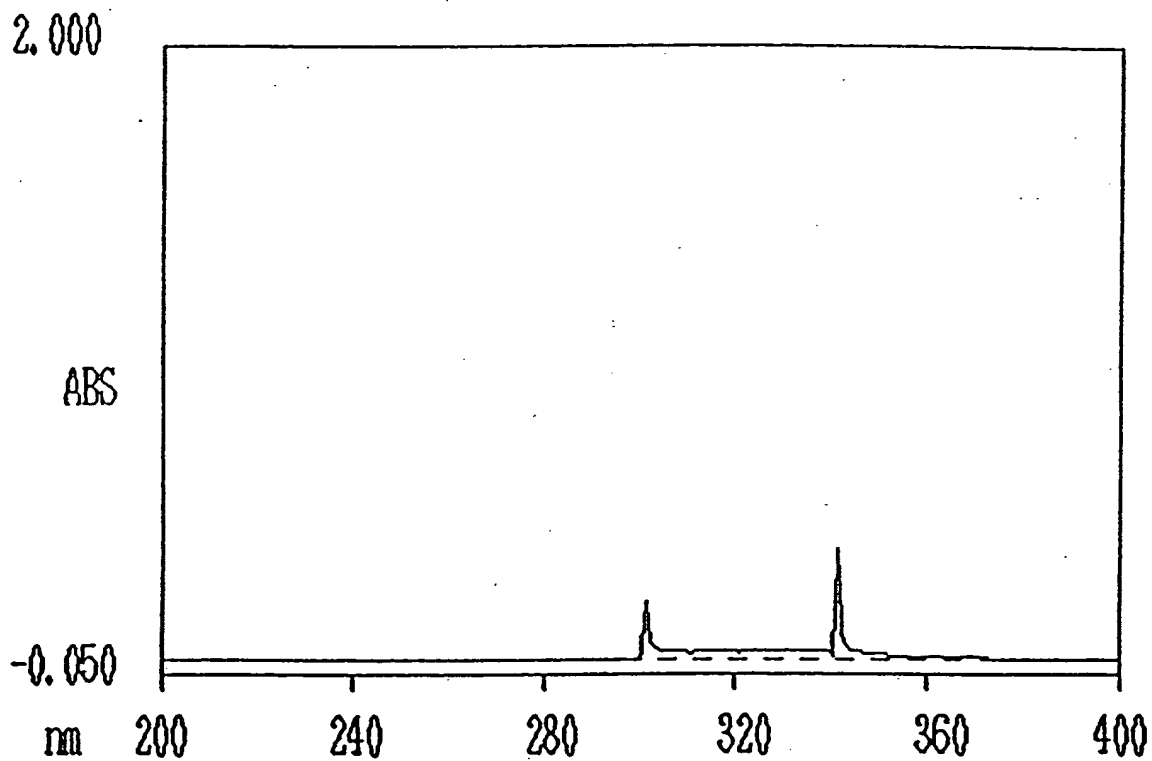
301.5 nm 0.889 ABS  
342.0 nm 2.044 ABS

FIG. 50

## Hexokinase Assay of Glucosamine

WAVELENGTH SCAN/0

03/01/00 14:50



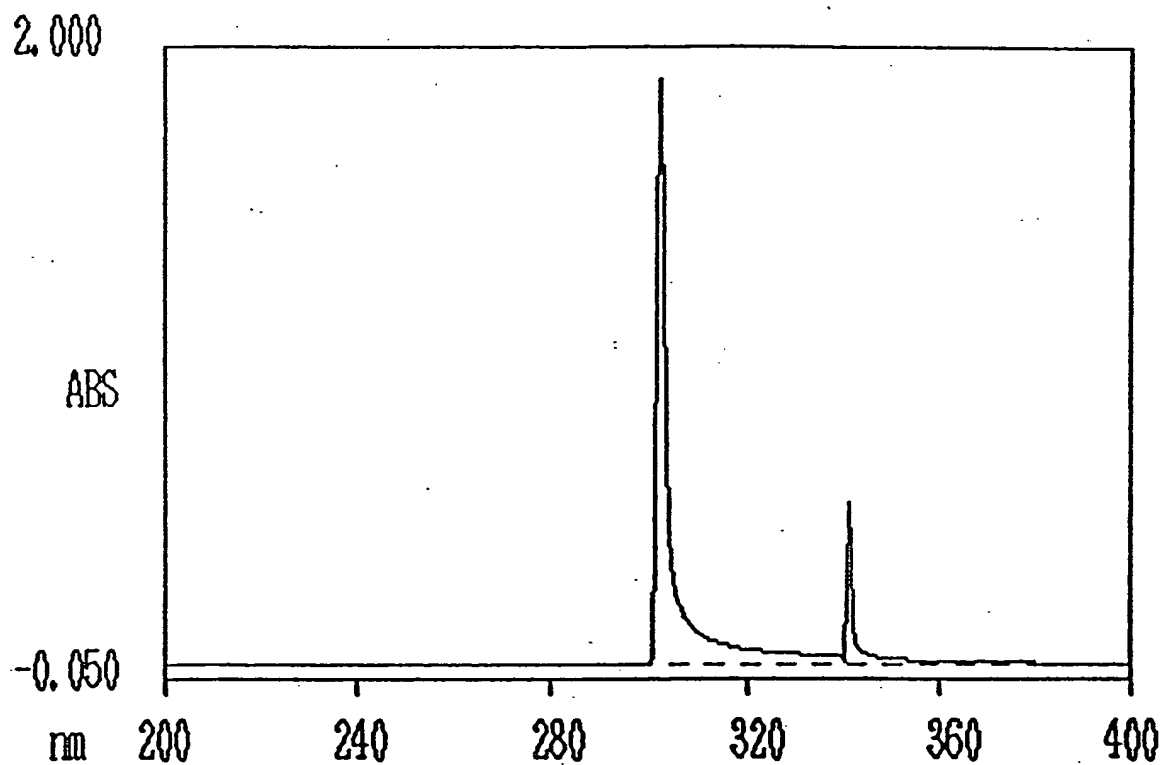
301.5 nm 0.193 ABS  
341.5 nm 0.360 ABS

FIG. 51

## Hexokinase Assay of EC-Glucosamine

WAVELENGTH SCAN/0

03/01/00 14:45



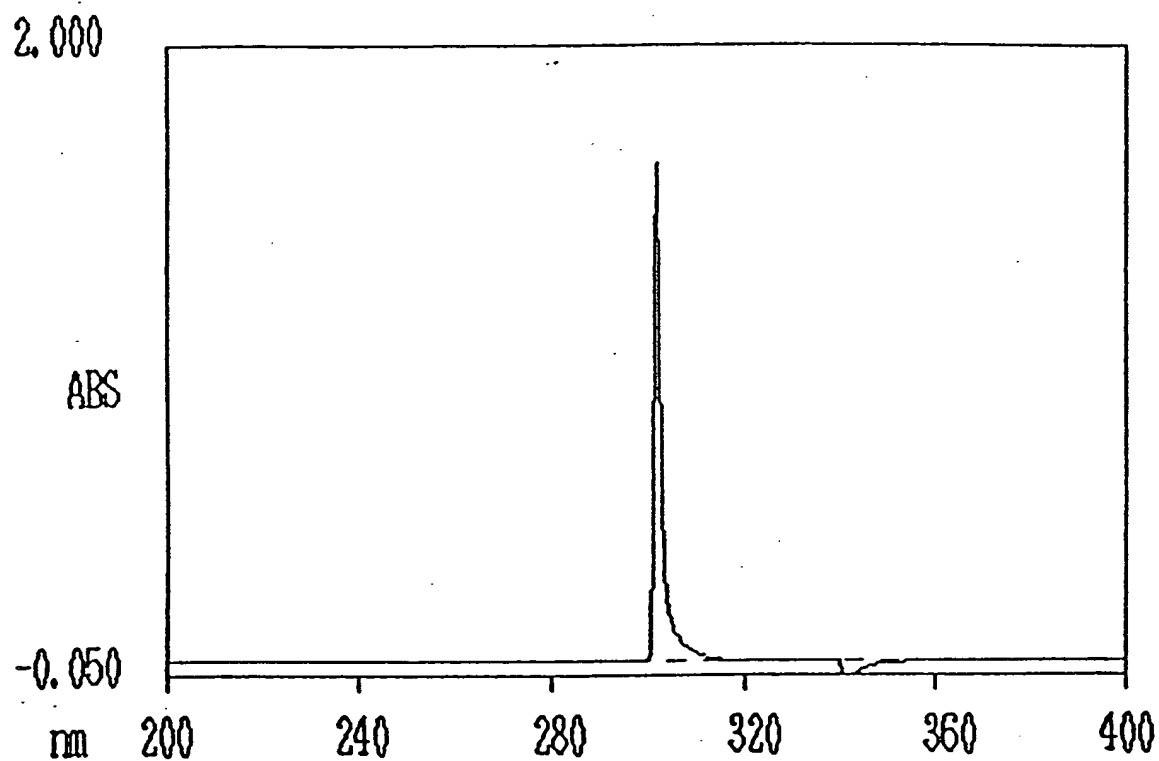
302.5 nm 1.897 ABS  
341.5 nm 0.523 ABS

FIG. 52

# Hexokinase Assay of EC-GAP-Glucosamine

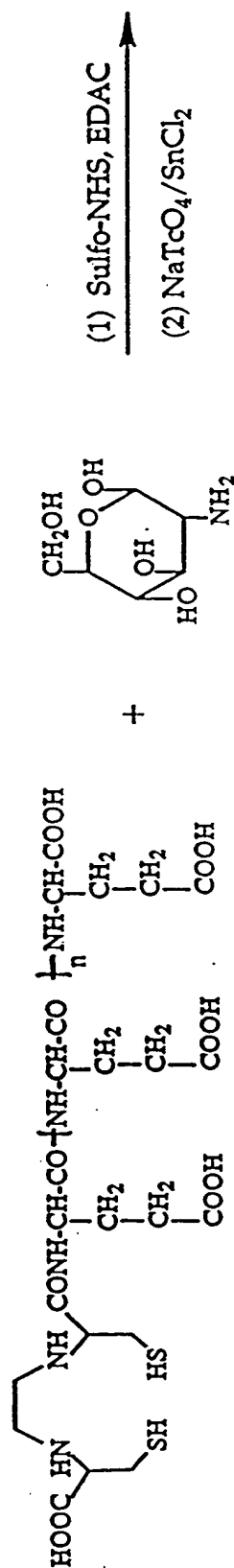
WAVELENGTH SCAN/0

03/01/00 15:37



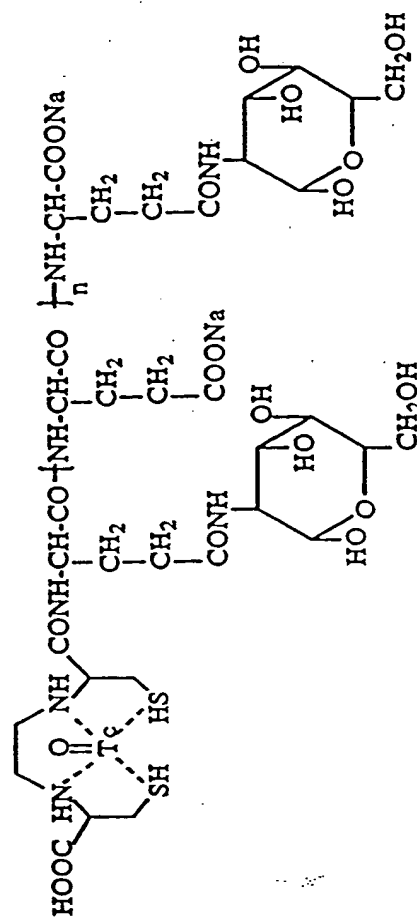
302.0 nm 1.620 ABS

FIG. 53



## D(+)-Glucosamine

## EC-GAP

<sup>99m</sup>Tc-EC-GAP-Glucosamine

**FIG. 54**  
**Synthesis of  $^{99m}\text{Tc}$ -EC-GAP-Glucosamine**

In Vitro Cellular Uptake of  $^{99m}\text{Tc}$ -EC in Human Lung Cancer Cell Line (A549)

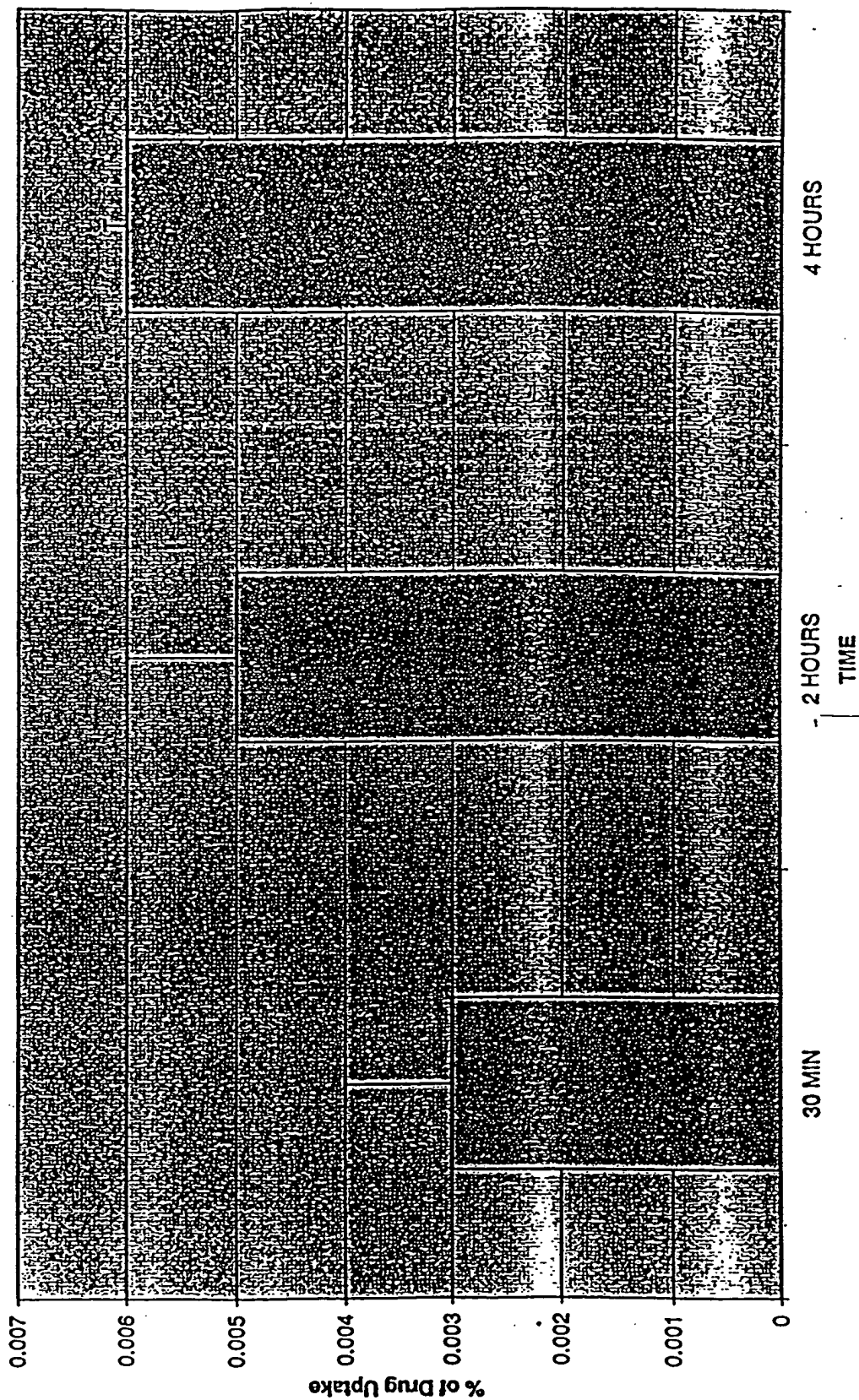


FIG. 55A

In Vitro Cellular Uptake of  $^{99m}\text{Tc}$ -EC-DG-GAP in Human Lung Cancer Cell Line (A549)

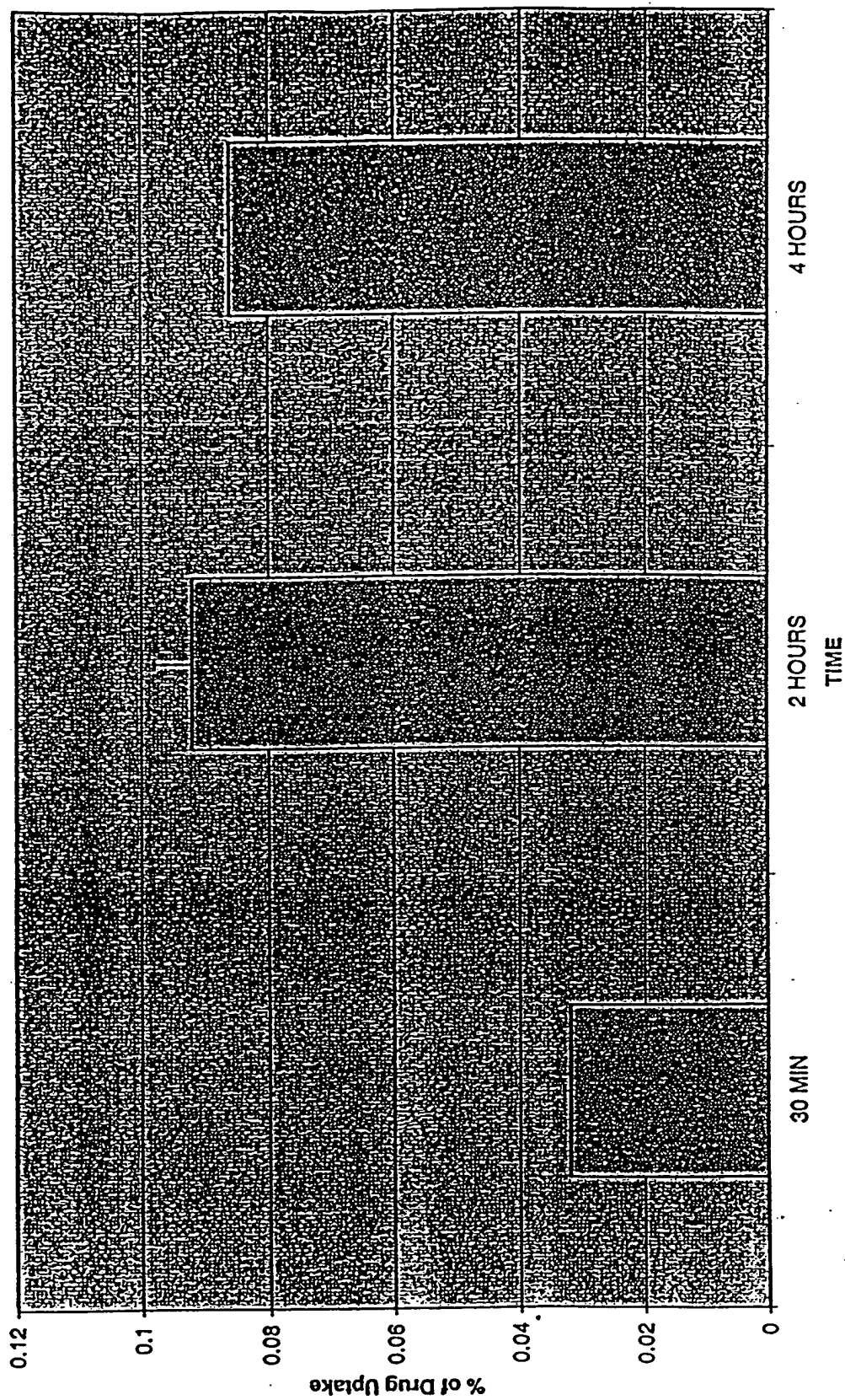


FIG. 55B



In Vitro Cellular Uptake of  $^{18}\text{F}$ FDG In Human Lung Cancer Cell Line (A549)

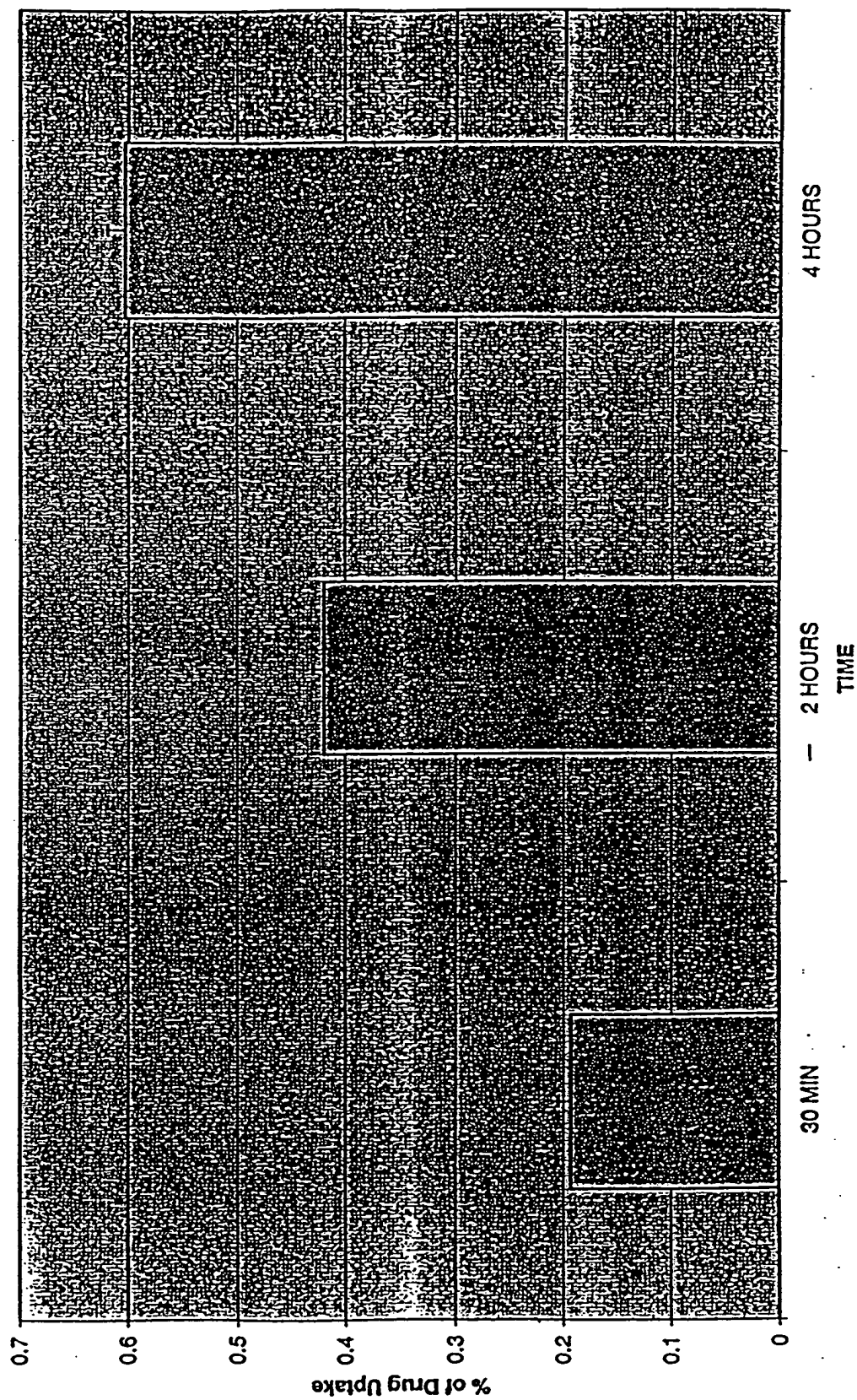


FIG. 55C

Tumor-to-tissue count density ratios of  $^{99m}\text{Tc}$ -EC-GAP in breast tumor-bearing rats  
(n=3/Interval; 10  $\mu\text{Ci}$ /rat, IV)

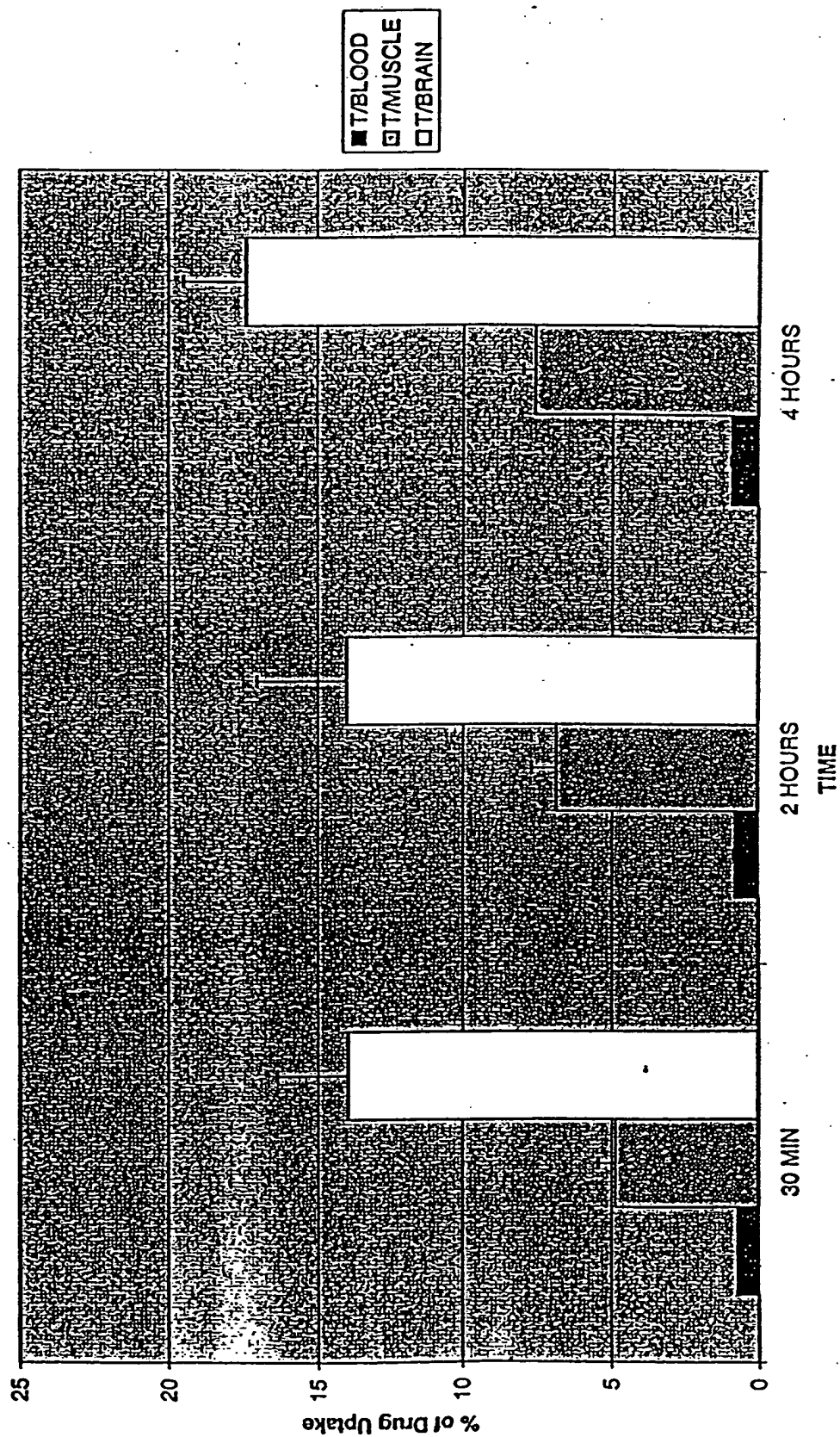


FIG. 56

In Vitro Cellular Uptake of  $^{18}\text{F}$ FDG with Glucose Loading at 2 Hours Post-Injection In Breast  
Cancer Cell Line (13762)

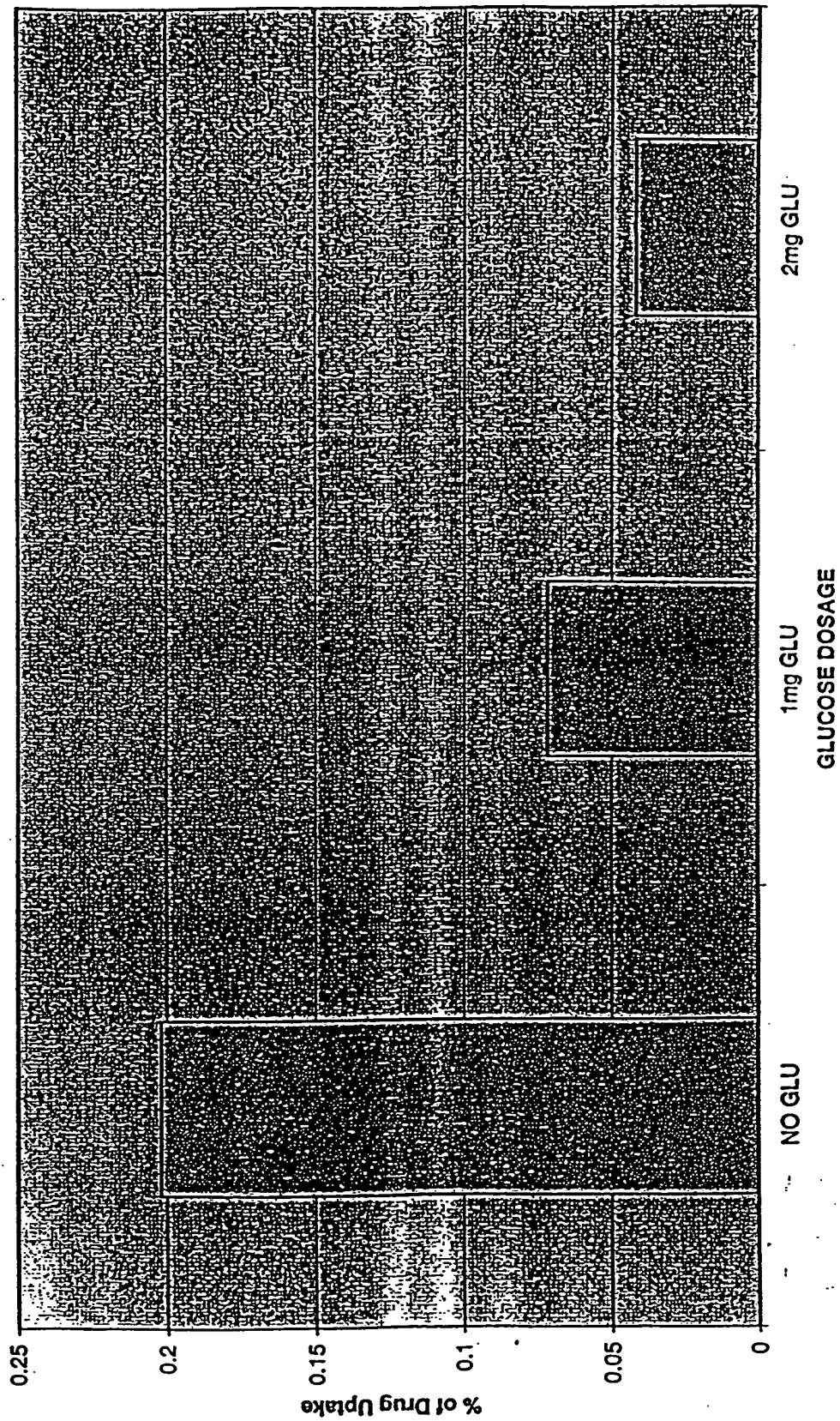


FIG. 57

% Uptake of  $^{99m}\text{Tc}$ -EC-Neomycin In Breast Tumor-Bearing Rats

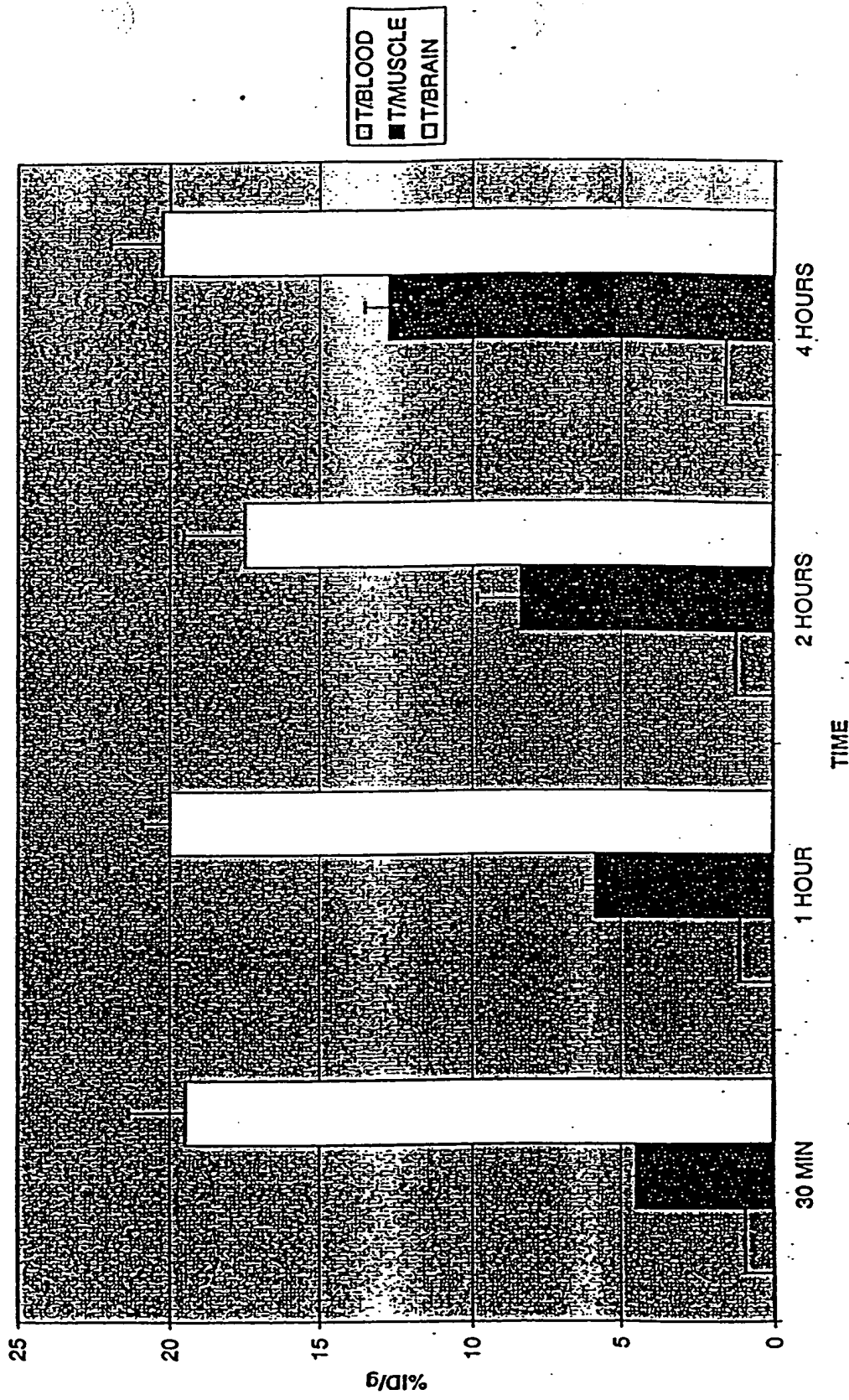
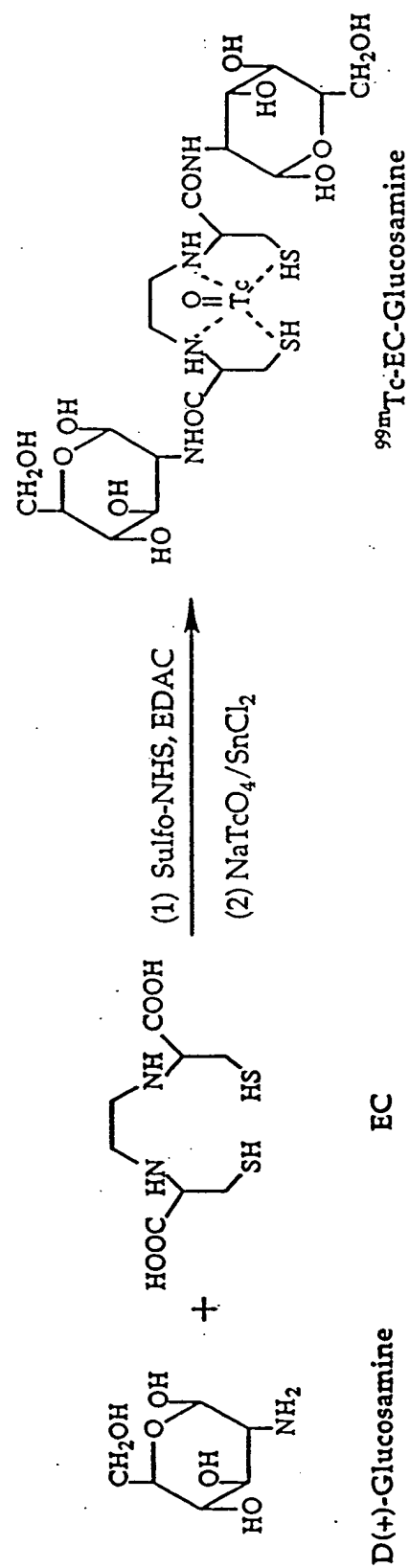


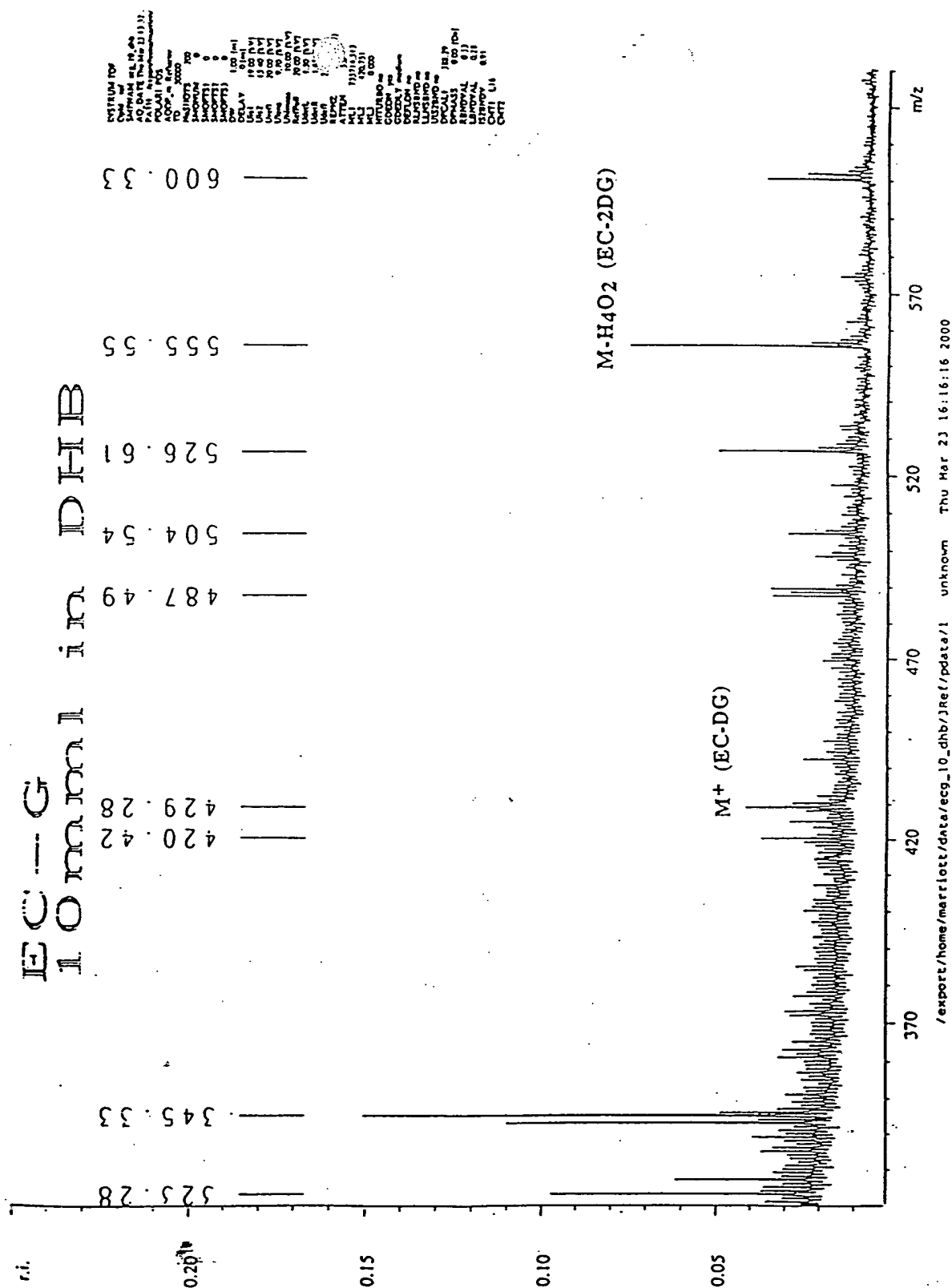
FIG. 58



Synthetic scheme of <sup>99m</sup>Tc-EC-deoxyglucose.

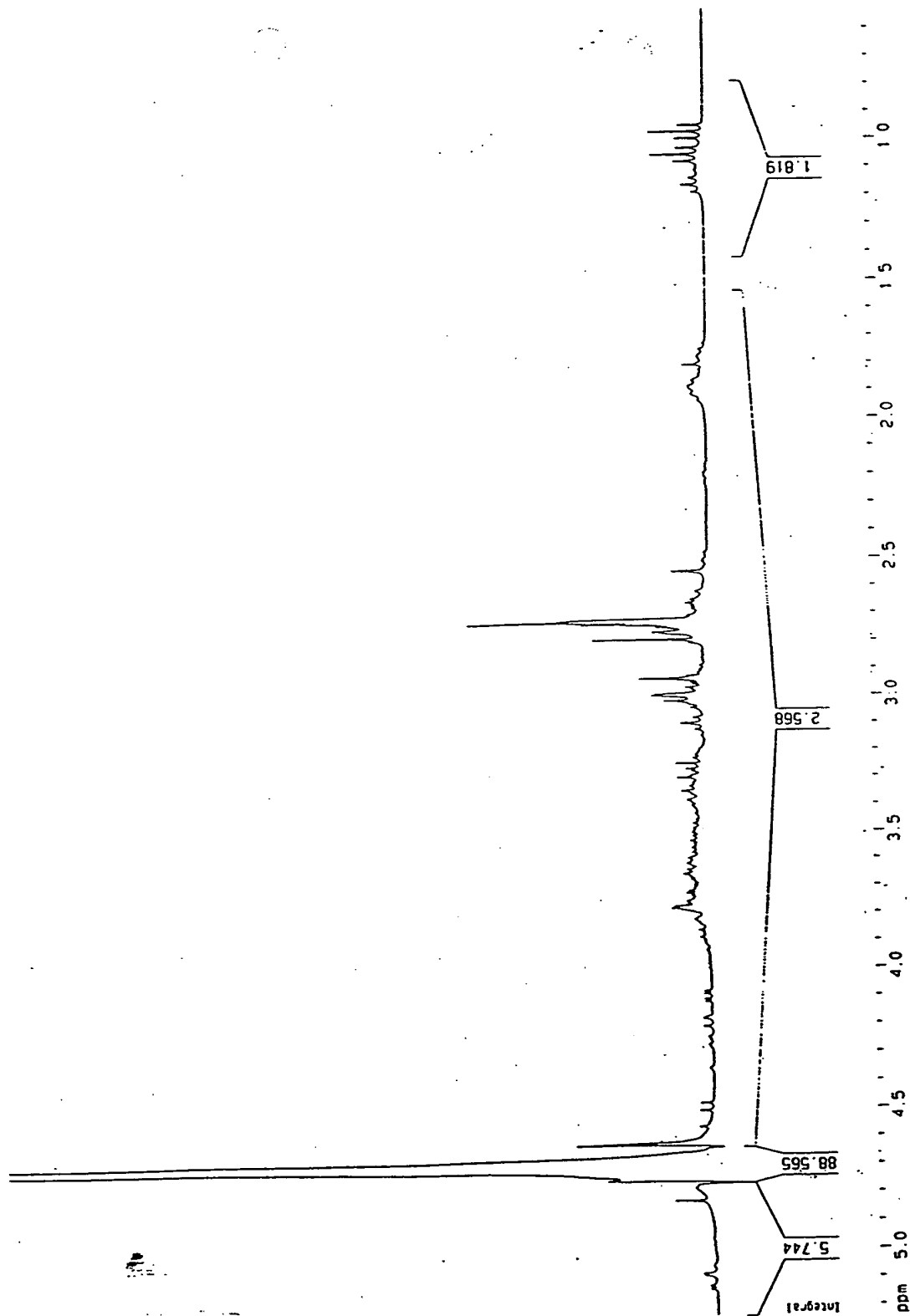
FIG. 59

# THE G-1000 in DHB



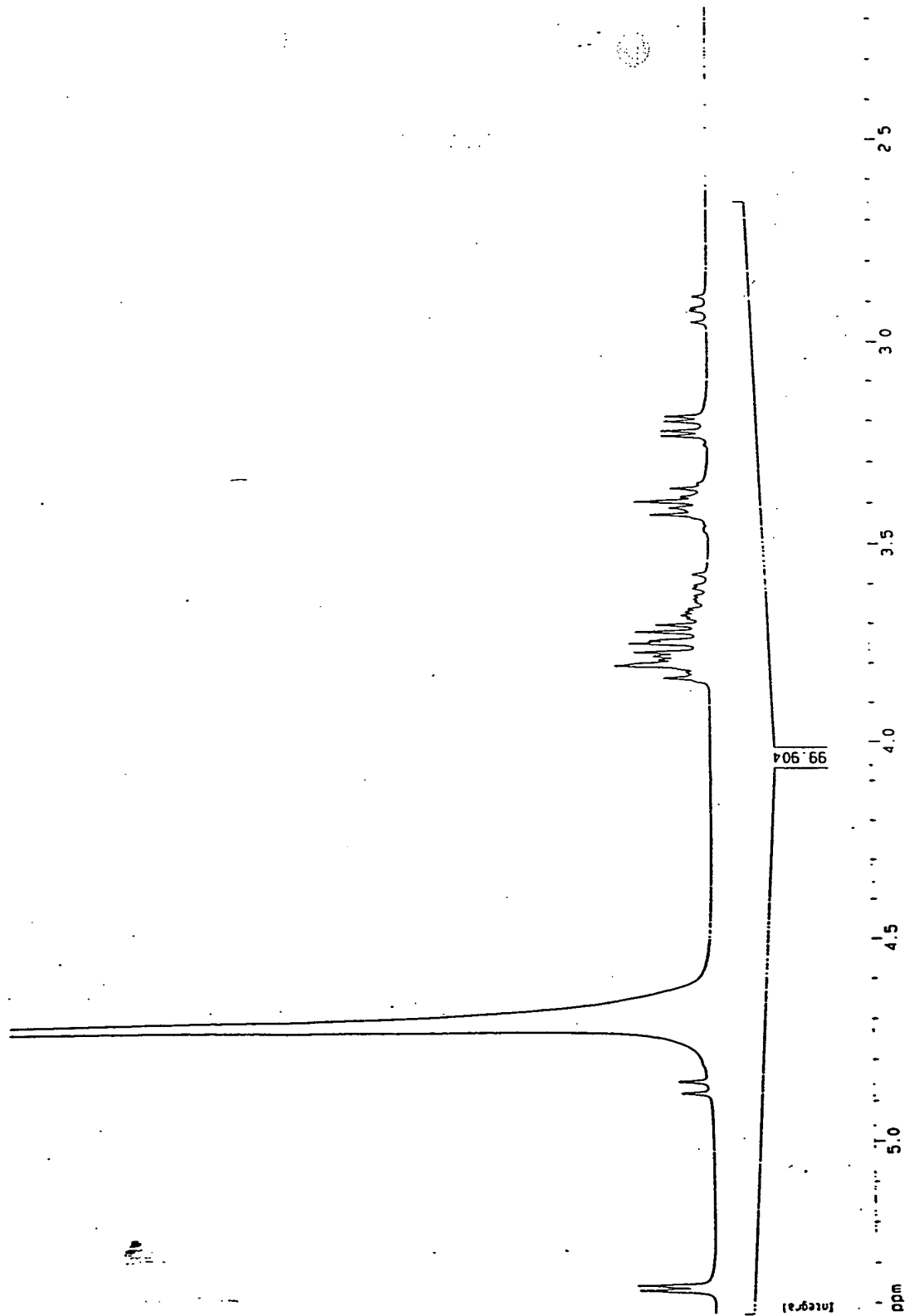
More information at [www.fda.gov/oc](http://www.fda.gov/oc)

EC-DG



<sup>1</sup>H-NMR of EC-deoxyribose (EC-DG).

Glucoseamine

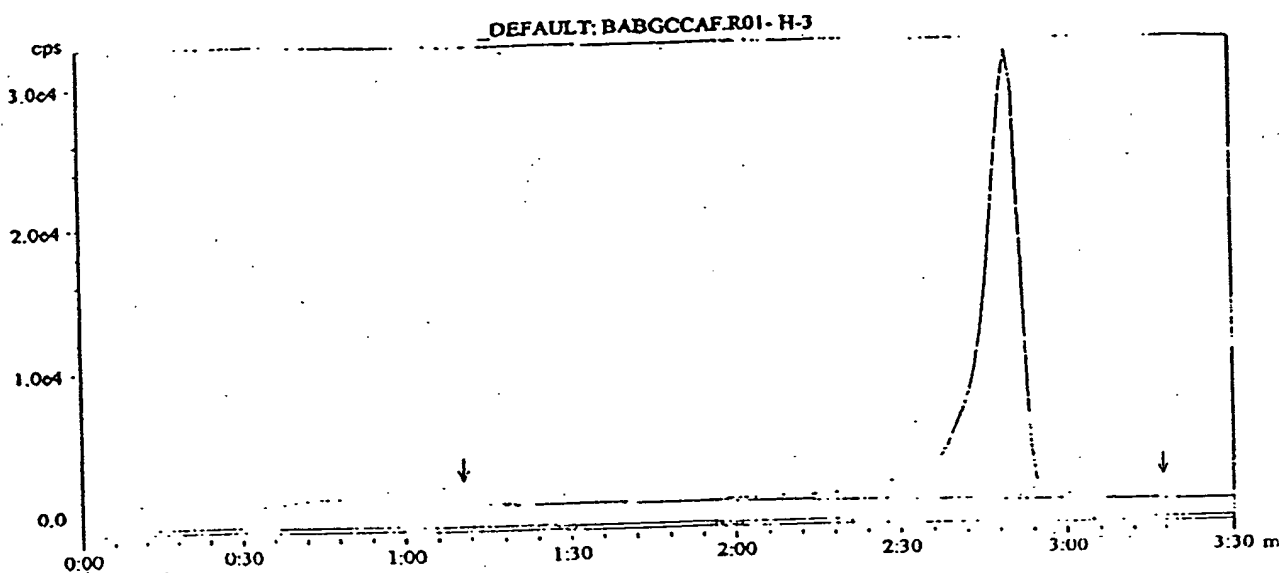


$^1\text{H}$ -NMR of glucosamine.

RTG. 62



(<sup>99m</sup>Tc-EC-DG, TLC)



Integrals: BABGCCAF.R01

Channel: H-3		Detector:					
Name	Start - End	RT	Height (cps)	Area (Counts)	%Total (%)	%ROI (%)	
Bkg 1	0: 00- 2: 19	1: 09	539.7				
Rgn 1	2: 19- 3: 02	2: 47	31606.2	263570.8	97.99	100.00	
Bkg 2	3: 02- 3: 27	3: 14	250.1				
1 Peak				263570.8	97.99	100.00	
Total Area = 268986.1 Counts							
Bkg Area = 89999.9 Counts							
Unallocated = 5415.3 Counts (2.01%)							

Trace Parameters: BABGCCAF.R01 H-3

Trace Display Smoothing: 0.0 s  
Trace Display Shift: 0.0 s  
Trace Display Factor: 1.000  
Channel Shift: 0.0 s  
Channel Factor: 1.000

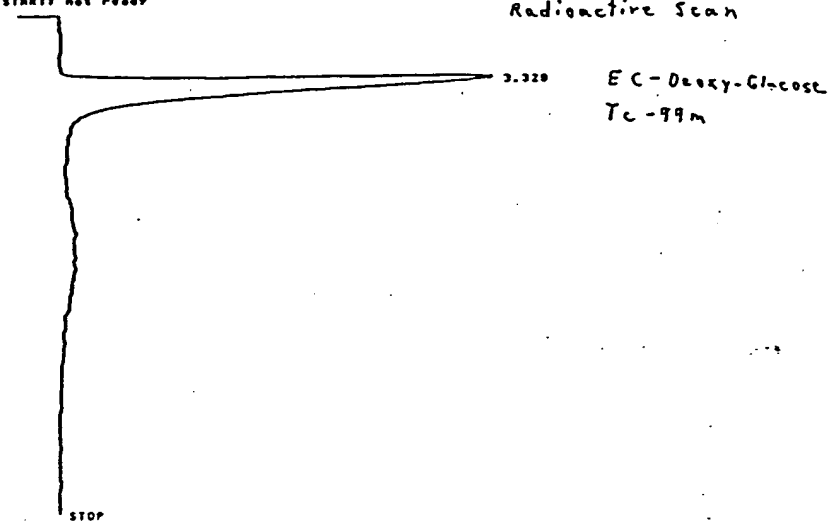
Regions were added manually.

FIG. 63

Radio-TLC analysis of <sup>99m</sup>Tc-EC-DG.

B. Rad Aminex HPX-87C  
 Column  
 250 x 4 mm  
 .4 ml/min. H<sub>2</sub>O at 85°C  
 Radiative Scan

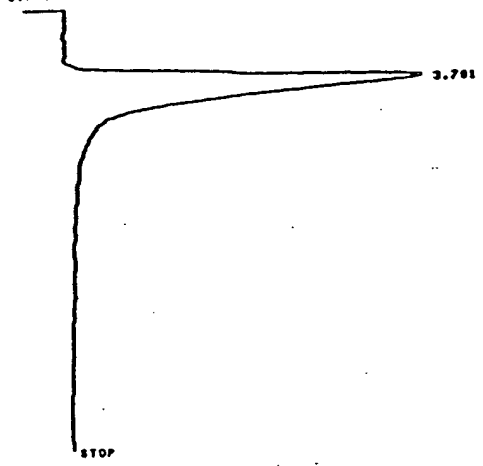
- ATT 2-7 8  
 - RUN 0 5 MAR 30, 1999 16143128  
 START: NOT READY



RUN 0 5 MAR 30, 1999 16143128  
 AREA  
 RT AREA TYPE WIDTH AREA  
 3.320 33350000 BV .013 100.00000  
 TOTAL AREA=3.3350E+07  
 MUL FACTOR=1.0000E+00

Radiative Scan

- RUN 0 6 MAR 30, 1999 15109139  
 START



RUN 0 6 MAR 30, 1999 15109139  
 AREA  
 RT AREA TYPE WIDTH AREA  
 3.701 16671194 BV .310 100.00000  
 TOTAL AREA=1.6671E+07

<sup>99m</sup>Tc-EC-deoxyglucose

<sup>99m</sup>Tc-EC

FIG. 64

HPLC analysis of <sup>99m</sup>Tc-EC-deoxyglucose and <sup>99m</sup>Tc-EC-  
 (radioactive detector).

• ATT 2<sup>+</sup> BREAK

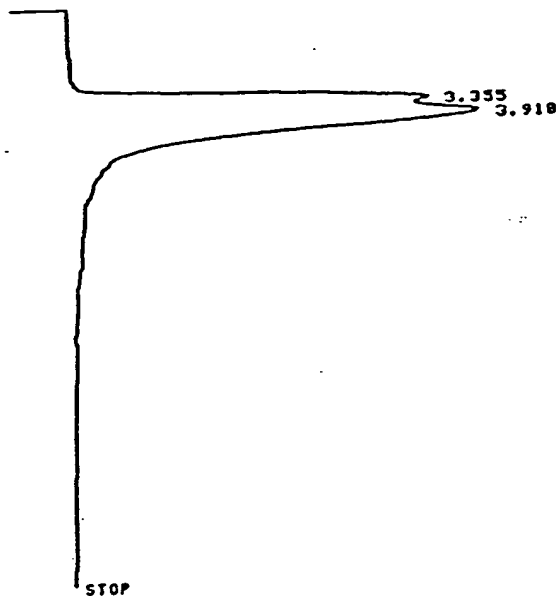
• BREAK

• LIST: ATT 2<sup>+</sup> = 7

• ATT 2<sup>+</sup> 8 8

• RUN 8 7 MAR 30, 1999 15132137

START



Radioactive Scan

Mixed Tc-99m  
EC-Deoxy-Glucose  
EC

<sup>99m</sup>Tc-EC-deoxyglucose + <sup>99m</sup>Tc-EC  
(mixed)

FIG. 65

HPLC analysis of <sup>99m</sup>Tc-EC-deoxyglucose and <sup>99m</sup>Tc-EC  
(radioactive detector, mixed).

RUN# 7 MAR 30, 1999 15132137

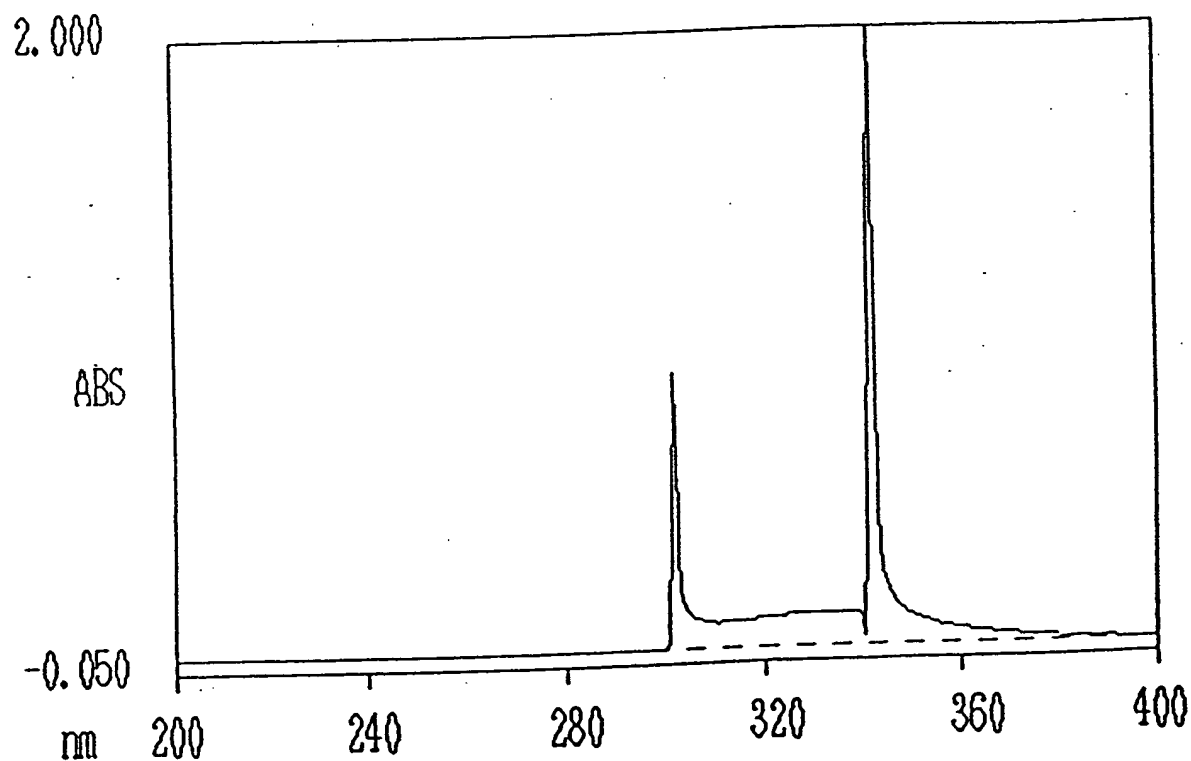
AREA#	RT	AREA	TYPE	WIDTH	AREA#
	3.355	22173768	BV	.448	58.46186
	3.918	21767872	VV	.387	49.53814

TOTAL AREA=4.3942E+07  
MUL FACTOR=1.0000E+00

# Hexokinase Assay of Glucose

WAVELENGTH SCAN/0

03/01/00 14:41



301.5 nm 0.889 ABS  
342.0 nm 2.044 ABS

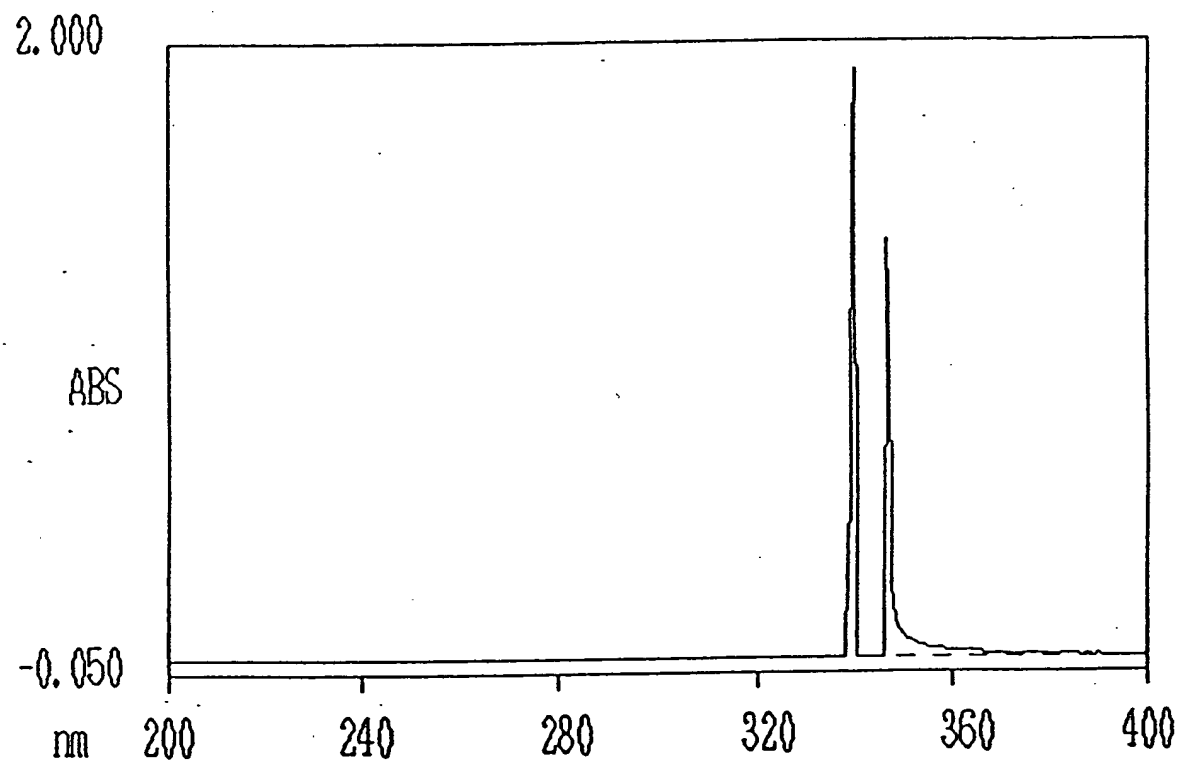
FIG. 66

Hexokinase assay of glucose.

## Hexokinase Assay of FDG

WAVELENGTH SCAN/0

03/09/00 14:34



340.0 nm 1.906 ABS  
346.5 nm 1.351 ABS

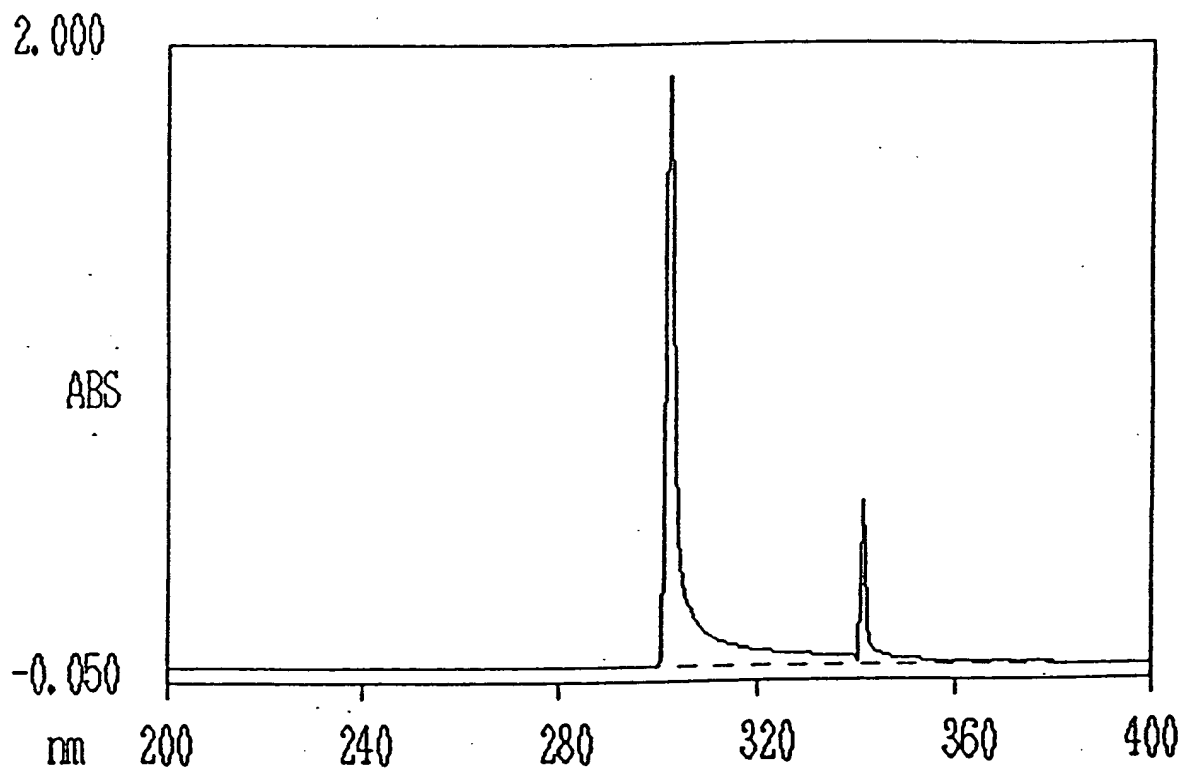
FIG. 67

Hexokinase assay of FDG.

# Hexokinase Assay of EC-Glucosamine (EC-DG)

WAVELENGTH SCAN/0

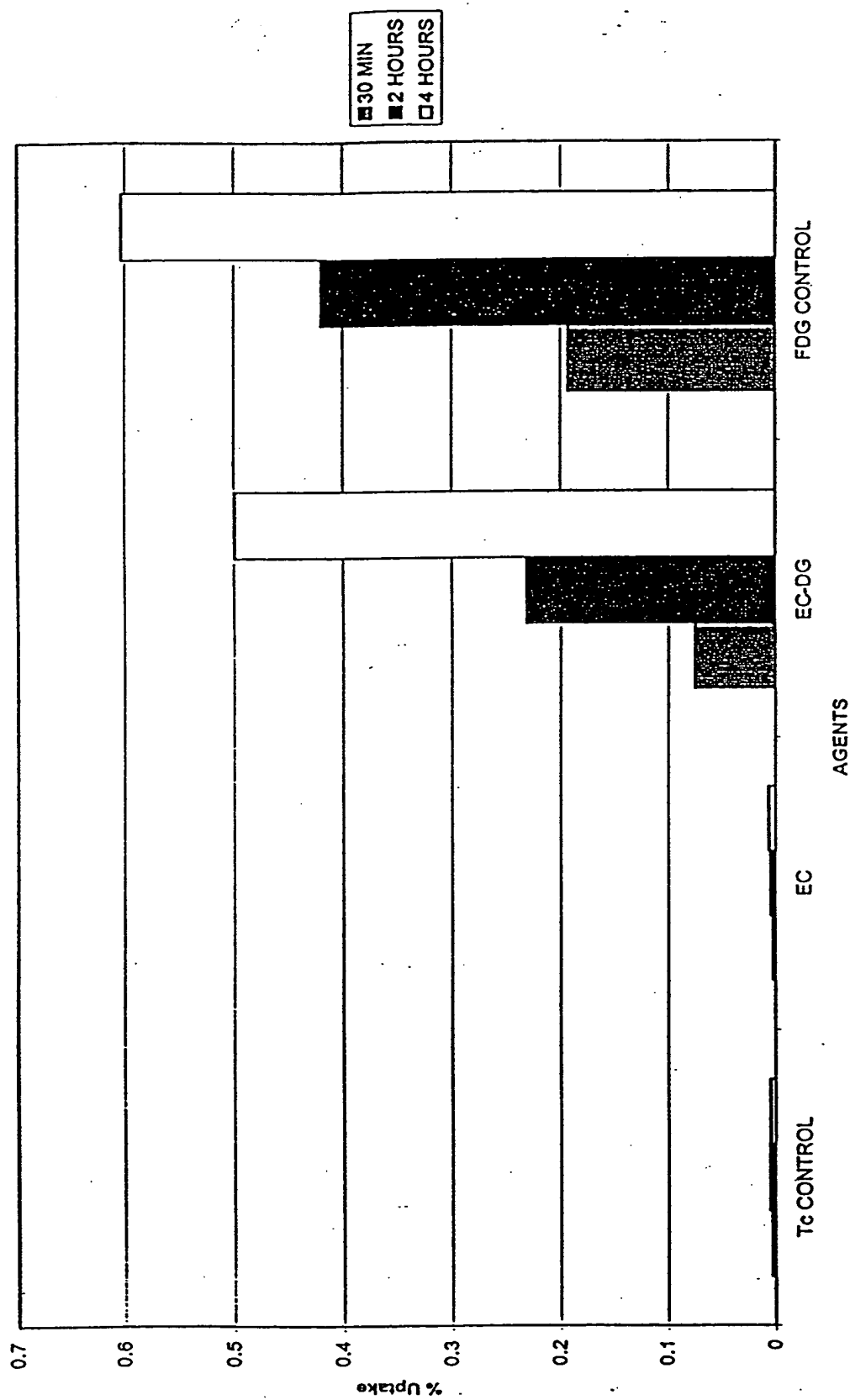
03/01/00 14:45



302.5 nm 1.897 ABS  
341.5 nm 0.523 ABS

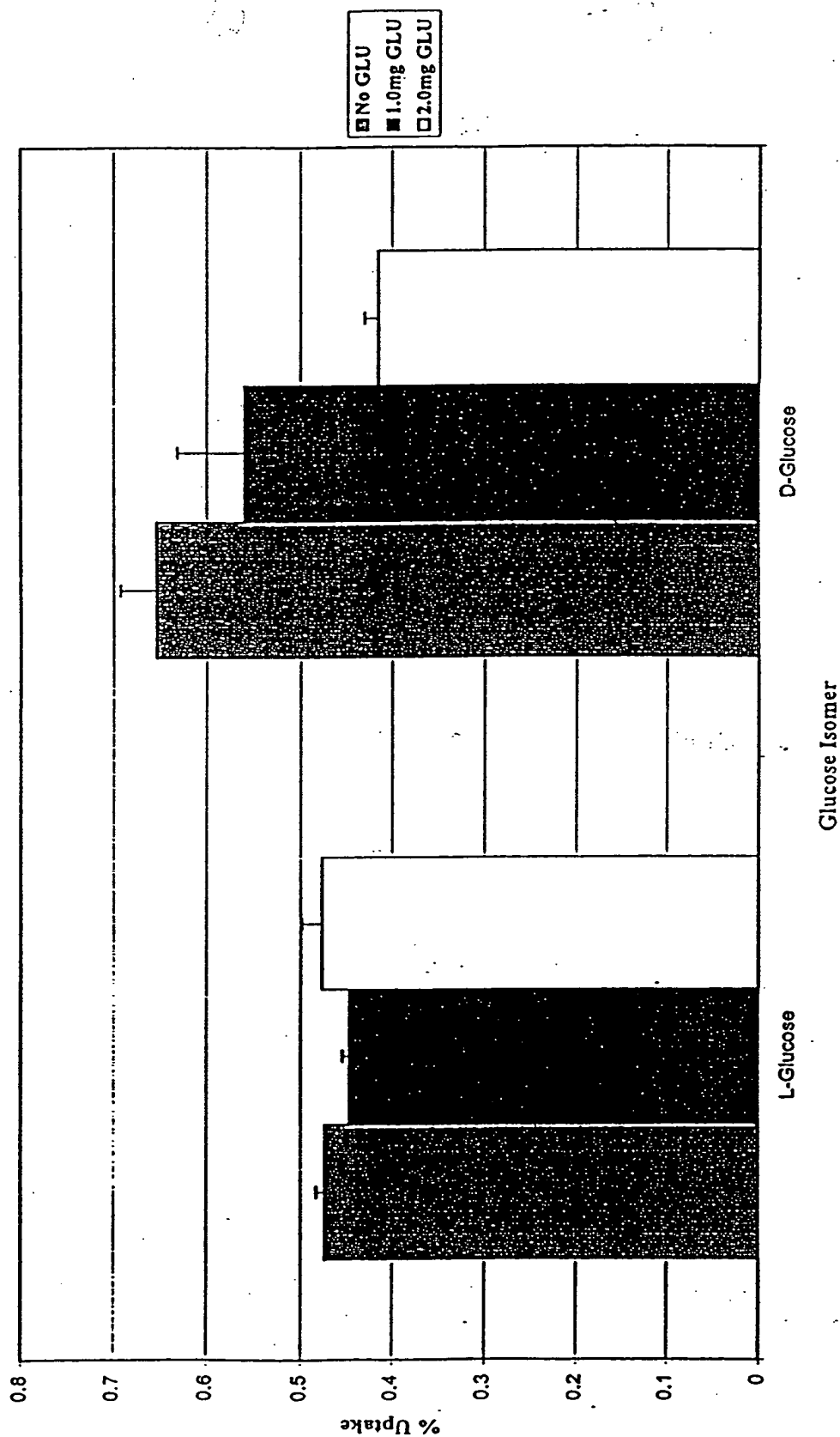
FIG. 68 Hexokinase assay of EC-DG.

# % of Drug Uptake in Lung Cancer Cell Line (A549)



**FIG. 69** In vitro cellular uptake assay of  $^{99m}\text{Tc}$ -EC-deoxyglucose,  $^{99m}\text{Tc}$ -EC and  $^{18}\text{F}$ -FDG in lung cancer cell line (A549).  $^{99m}\text{Tc}$ -EC-DG showed similar uptake compared to  $^{18}\text{F}$ -FDG.

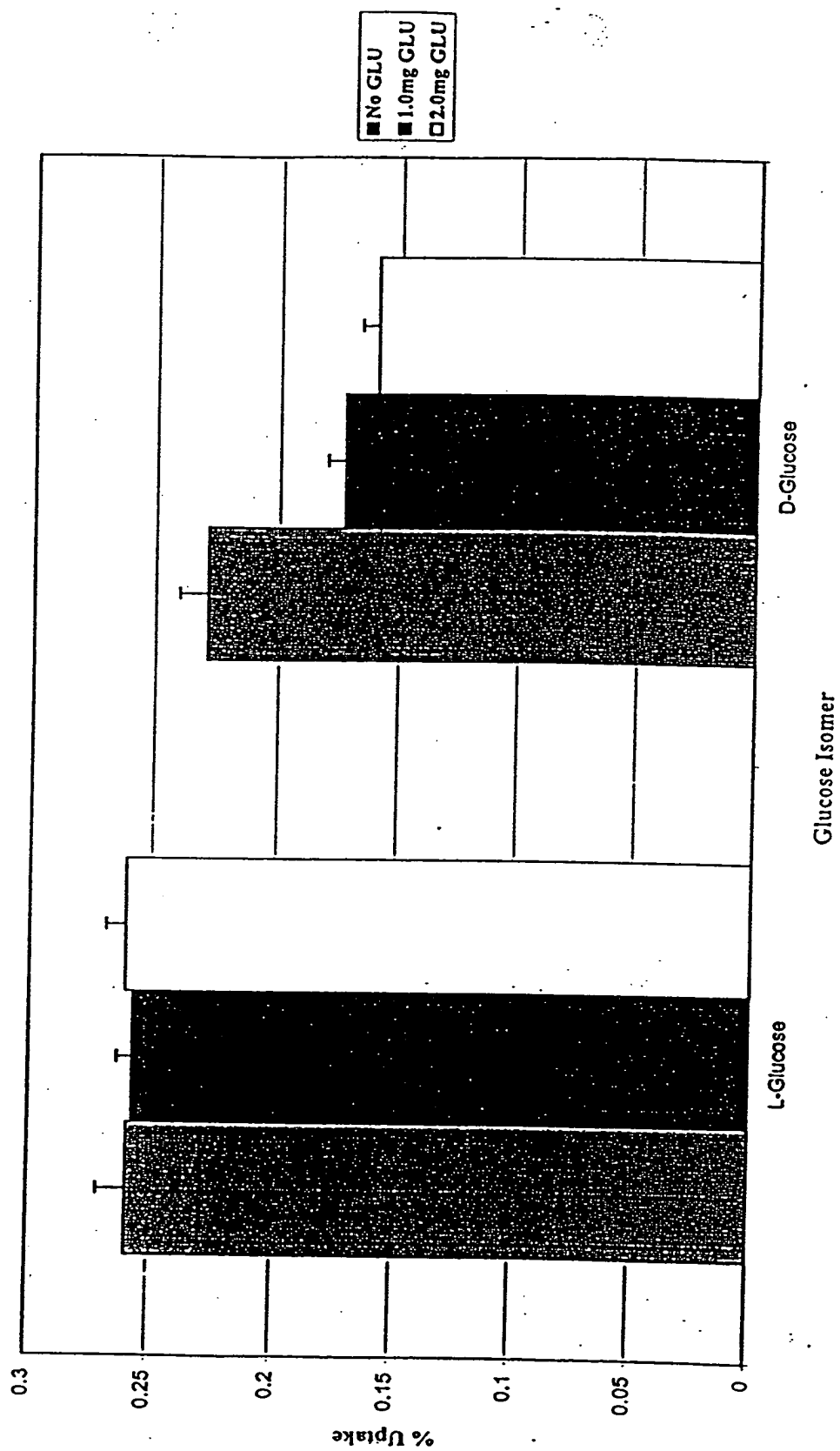
***In Vitro* Cellular Uptake of  $^{99m}\text{Tc}$ -EC-DG in Breast Cancer Cells after Glucose Loading (2 hours incubation; 2uCi/well; 50,000 cells/well; 0.5mL/well)**



**FIG. 70**  
Effect of d- and l-glucose on breast cellular ( $13762$  cell line) uptake of  $^{99m}\text{Tc}$ -EC-DG.

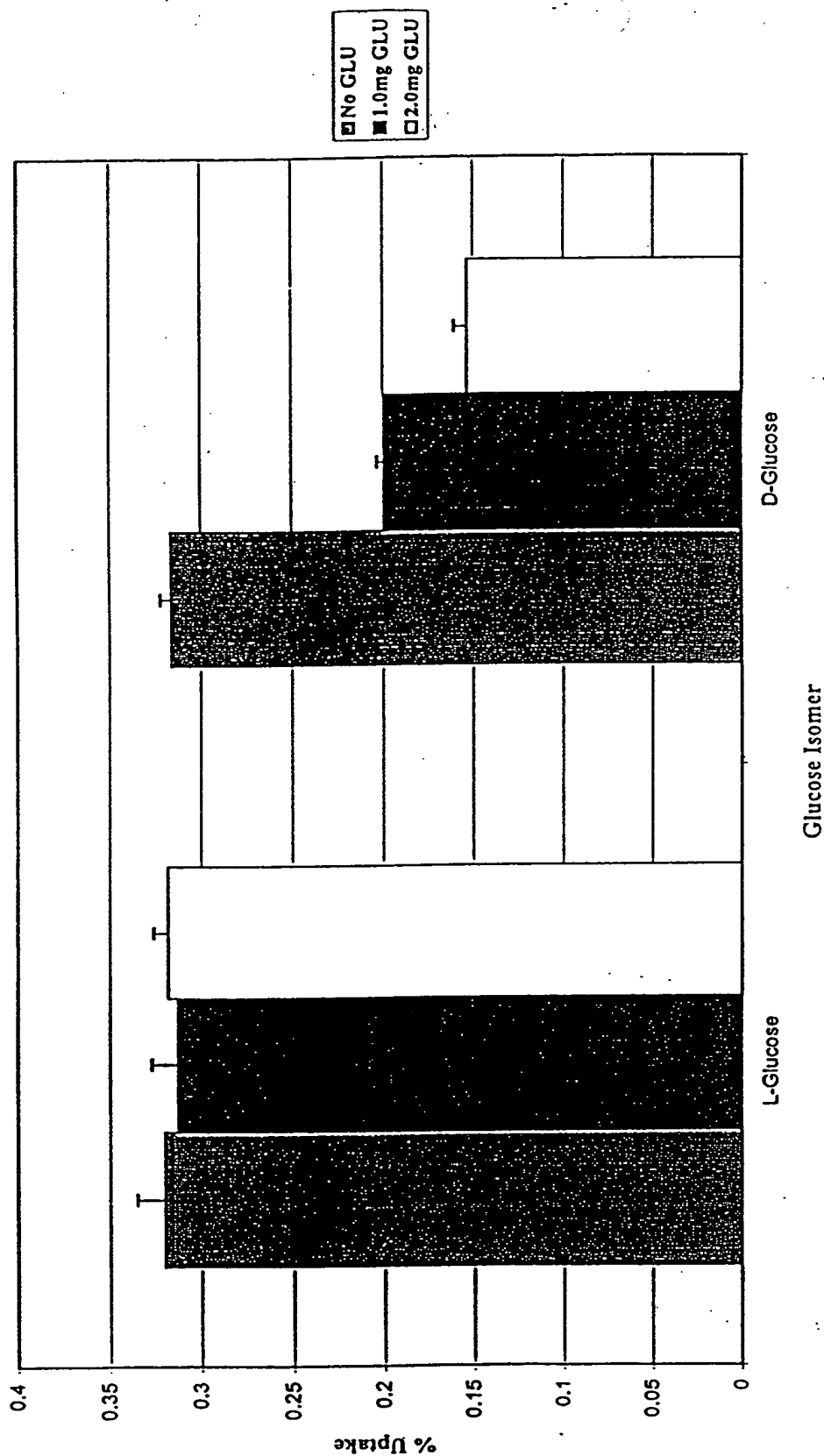


*In Vitro* Cellular Uptake of  $^{18}\text{F}$  FDG in Breast Cancer Cells after Glucose Loading (2 hours incubation; 2uCi/well; 50,000 cells/well; 5mL/well)



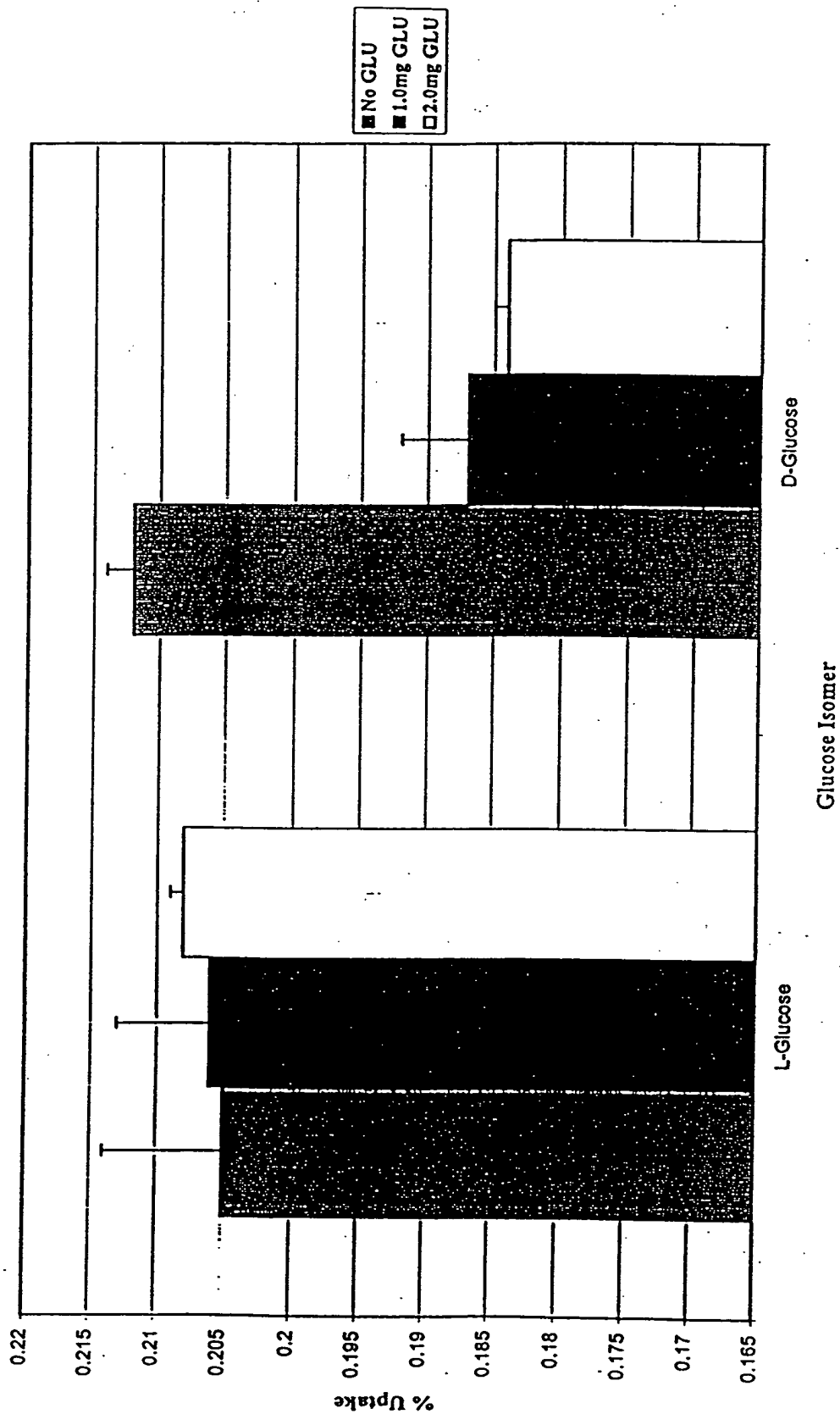
**FIG. 71** Effect of d- and l-glucose on breast cellular (13762 cell line) uptake of  $^{18}\text{F}$ -FDG.

*In Vitro* Cellular Uptake of  $^{18}\text{F}$ FDG in Lung Cancer Cells after Glucose Loading (2 hours incubation;  
2 $\mu\text{Ci}$ /well; 50,000 cells/well; 5mL/well)



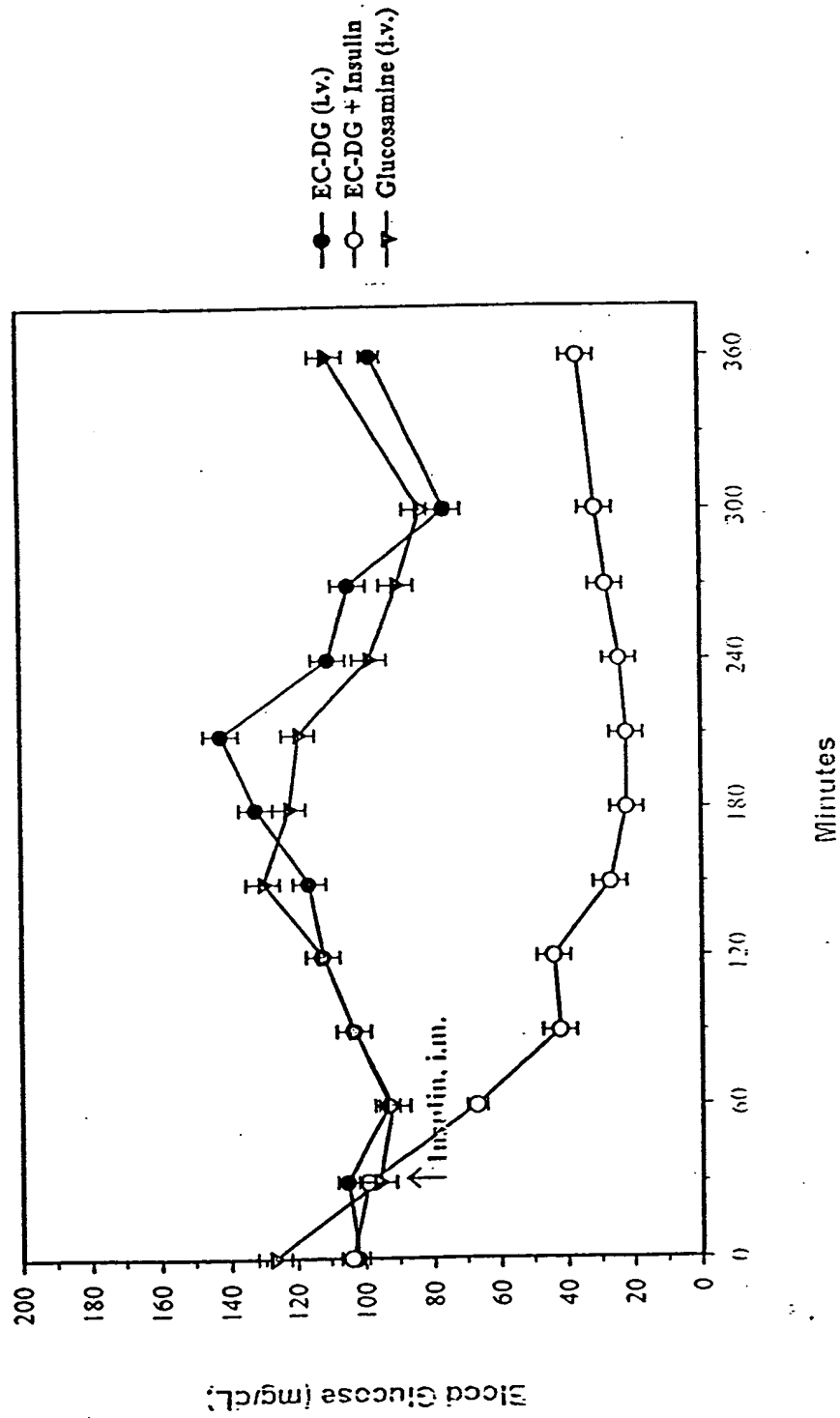
**FIG. 72** Effect of d- and l-glucose on lungcellular (A549 cell line) uptake of  $^{18}\text{F}$ FDG.

*In Vitro* Cellular Uptake of  $^{99m}\text{Tc-EC-DG}$  in Lung Cancer Cells after Glucose Loading (2 hours  
incubation;  $2\mu\text{Ci/well}$ ; 50,000 cells/well;  $0.5\text{mL/well}$ )



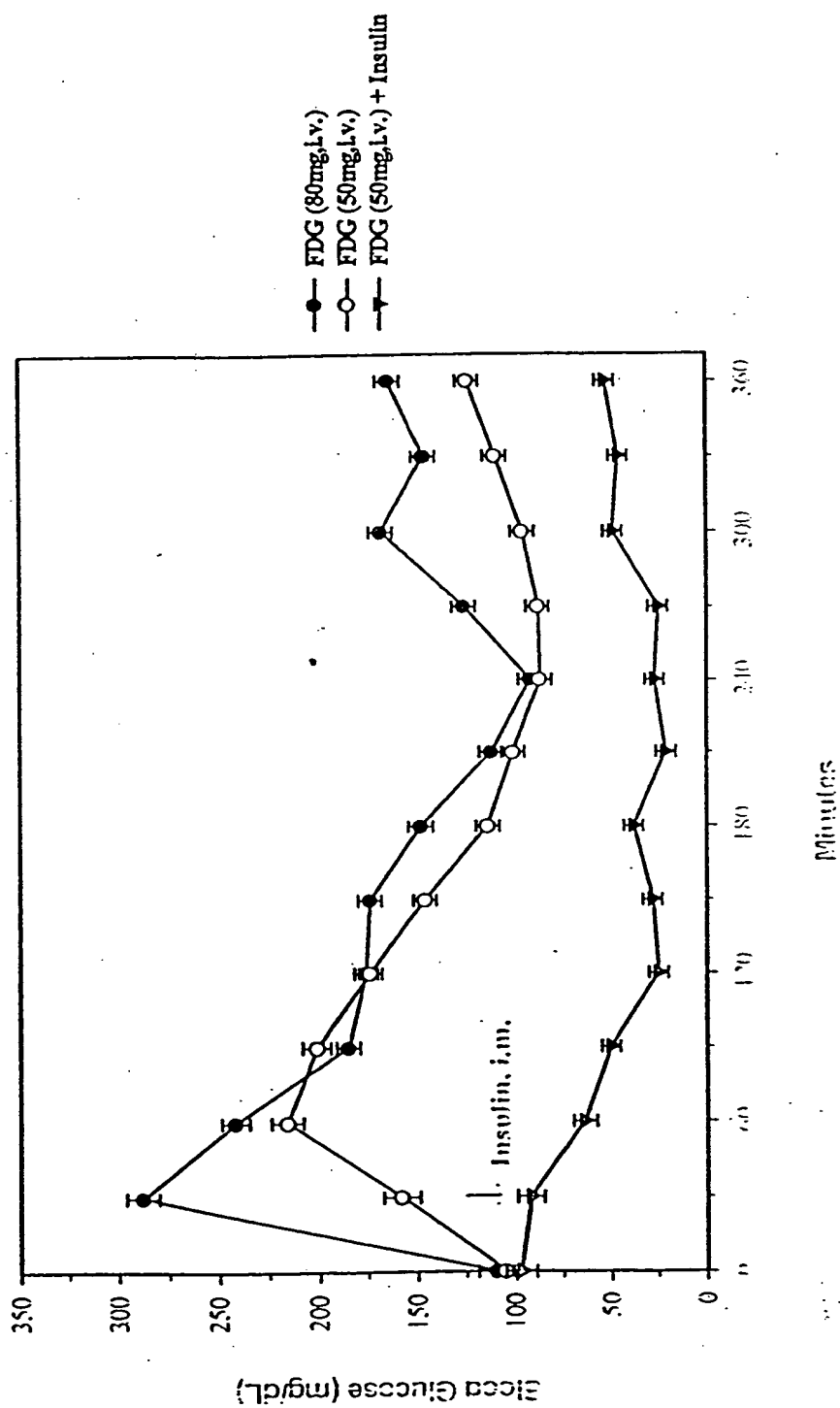
**FIG. 73** Effect of d- and l-glucose on breast cellular (A549 cell line) uptake of  $^{99m}\text{Tc-EC-DG}$ .

# Effect of Intravenous Injection of Glucosamine and EC-DG on Blood Glucose Level in Rats



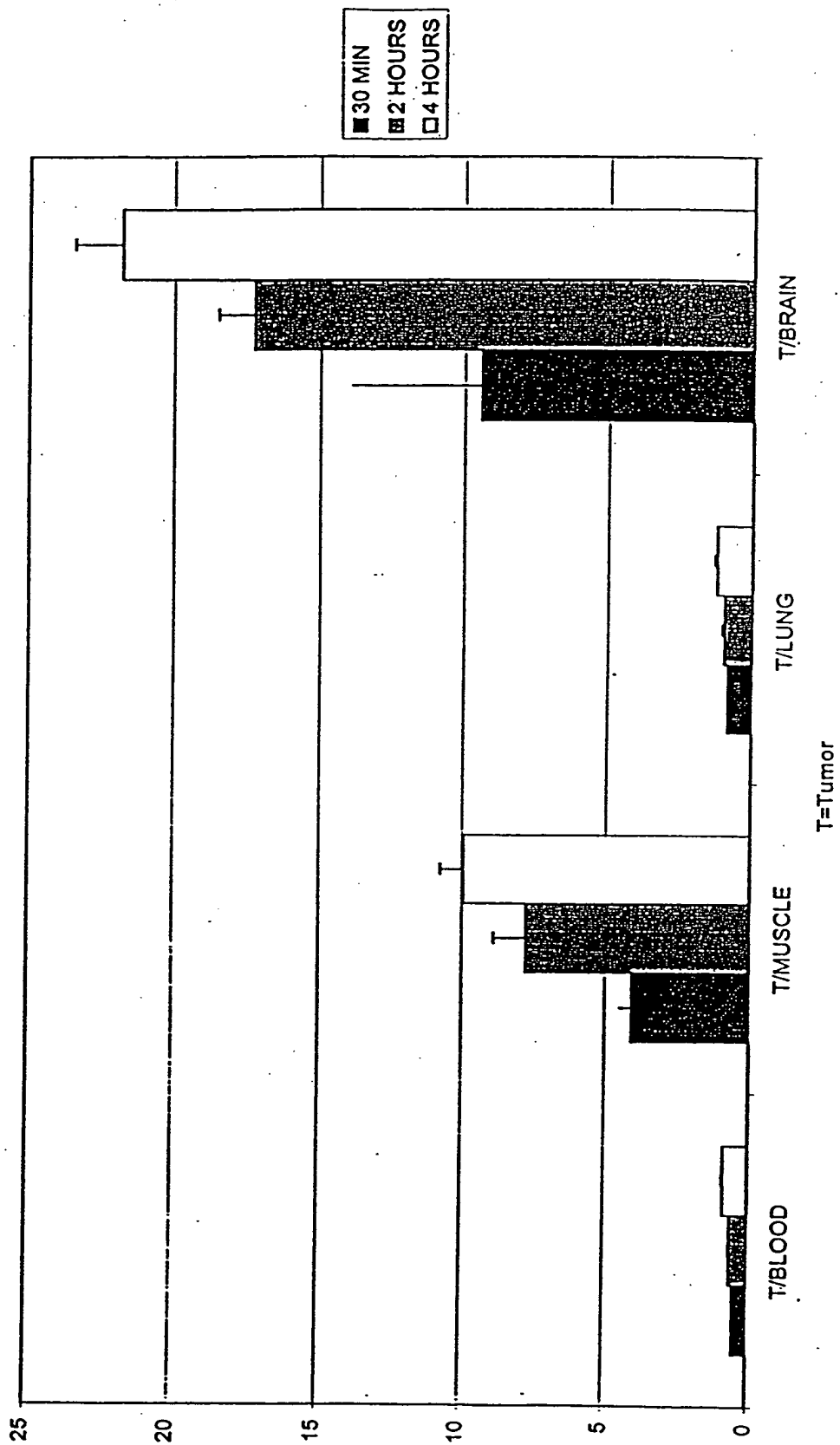
**FIG. 74** Effect of *in vivo* blood glucose level induced by glucosamine and EC-DG (1.2 mmol/kg, i.v.).

# Effect of Intravenous Injection of FDG and FDG+Insulin on Blood Glucose Level in Rats



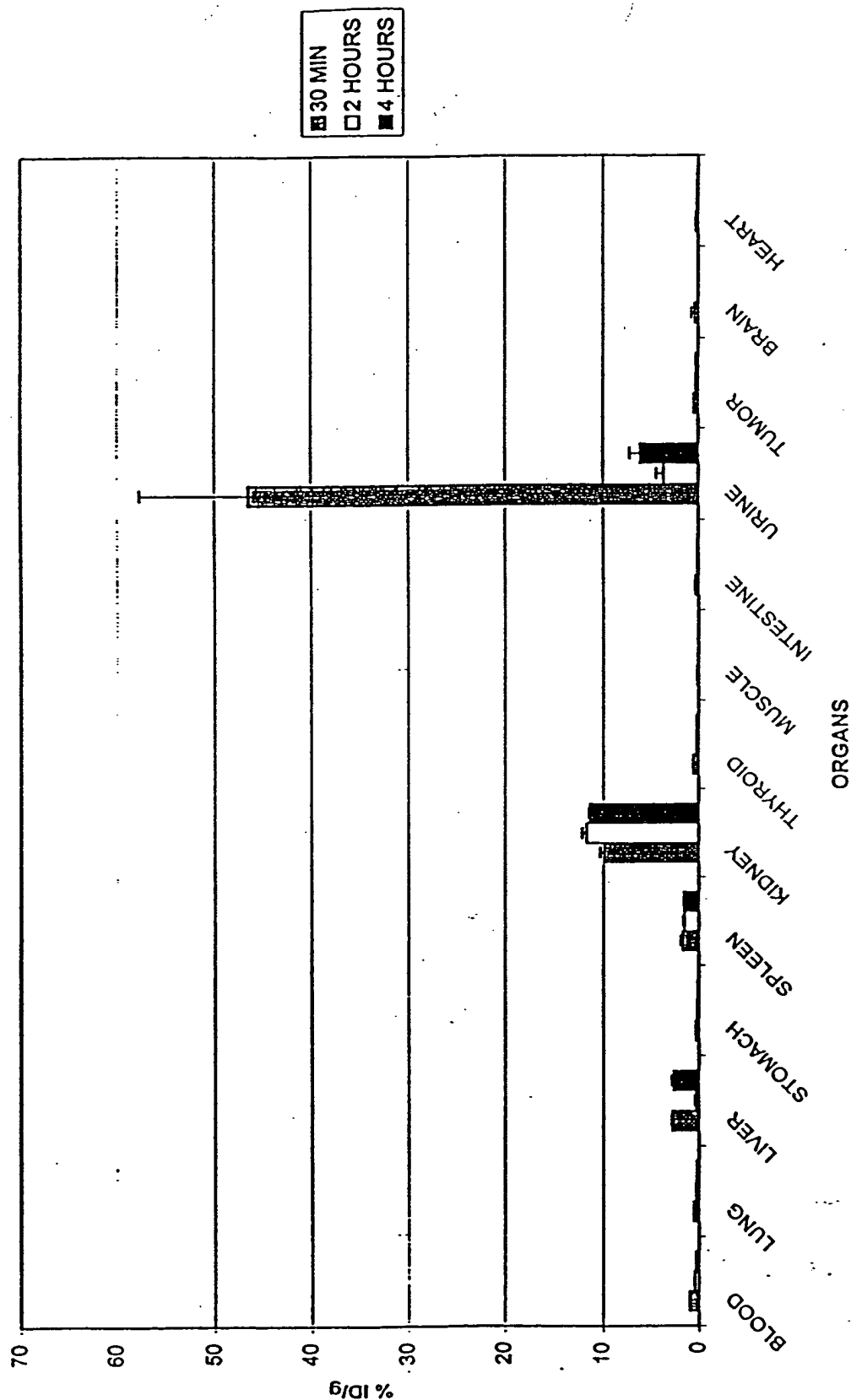
**FIG. 75** Effect of *in vivo* blood glucose level induced by FDG (1.2 and 1.9 mmol/kg, i.v.) and insulin.

# Tumor-to-Tissue Count Density Ratios of $^{99m}\text{Tc}$ -EC-Deoxyglucose in Breast Tumor-Bearing Rats



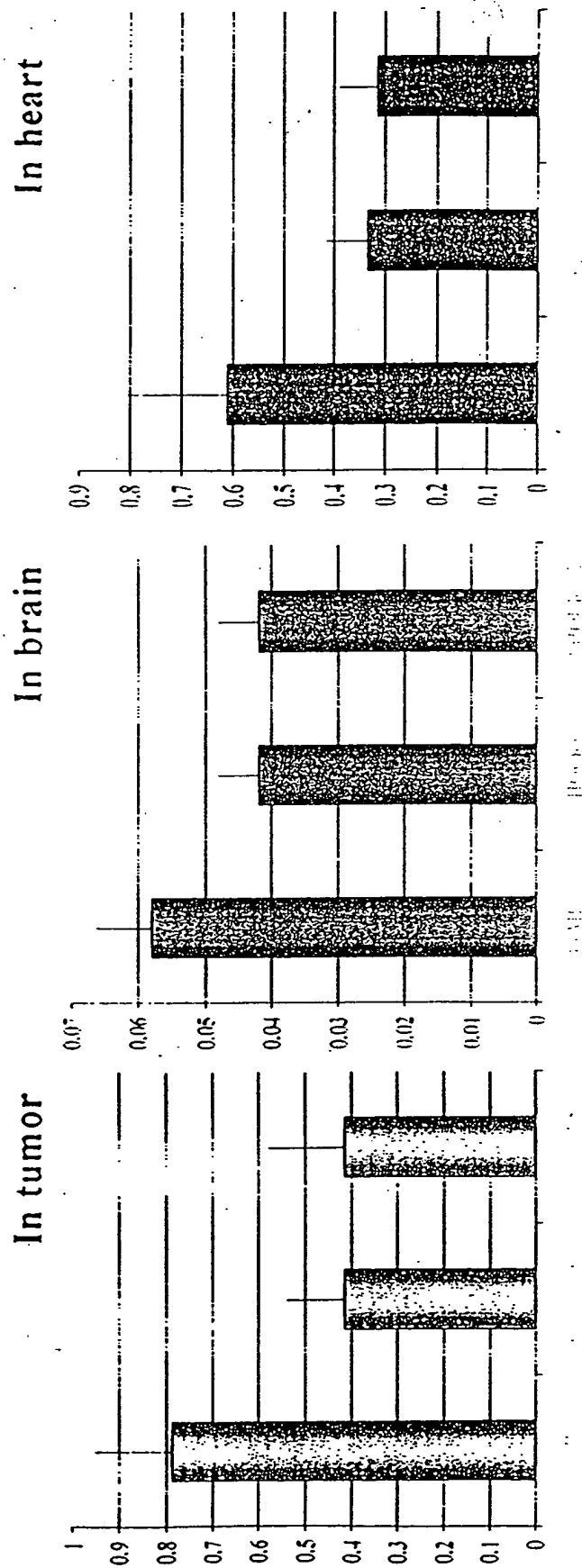
**FIG. 76** Tumor-to-tissue count density ratios of  $^{99m}\text{Tc}$ -EC-deoxyglucose in breast tumor-bearing rats.

# *In Vivo Uptake of $^{99m}\text{Tc}$ -EC-Deoxyglucose in Breast Tumor-Bearing Rats*



**FIG. 77** In vivo biodistribution of  $^{99m}\text{Tc}$ -EC-deoxyglucose in breast tumor-bearing rats.

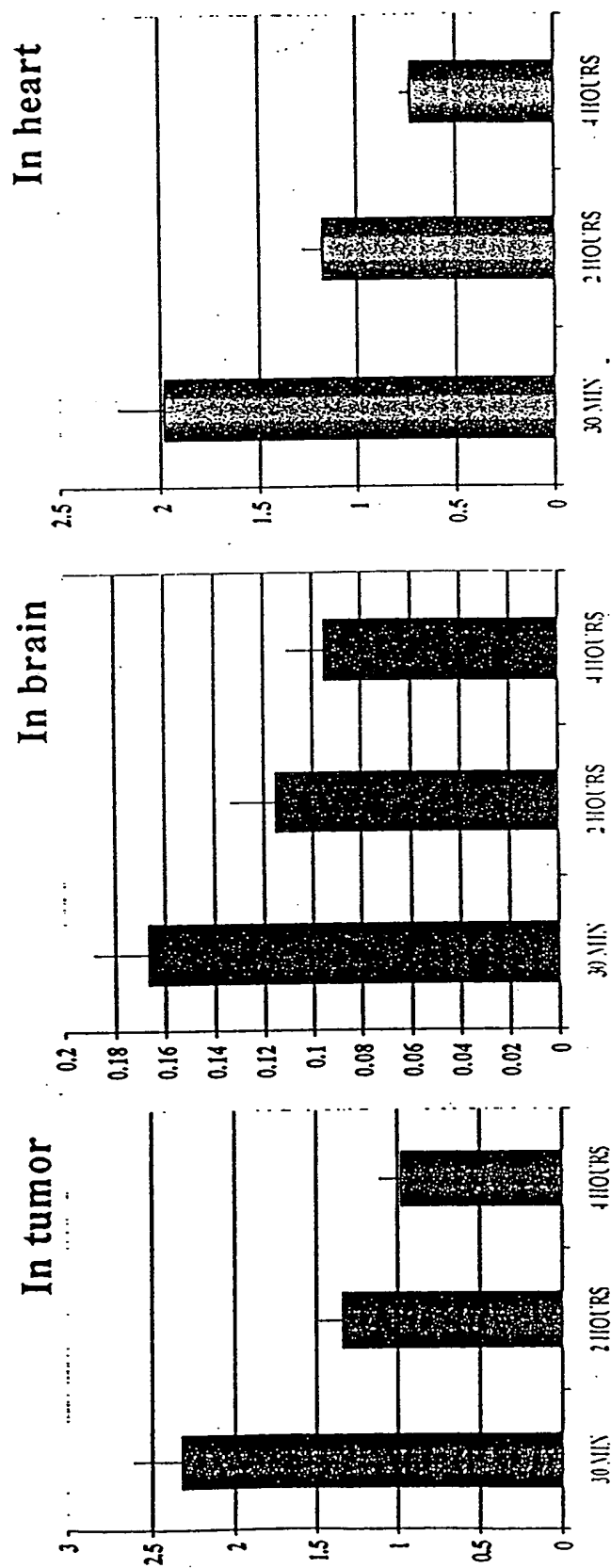
# *In Vivo* Uptake of $^{99m}\text{Tc}$ -EC-Deoxyglucose in Lung Tumor-Bearing Nude Mice



**FIG. 78** In vivo tissue uptake of  $^{99m}\text{Tc}$ -EC-deoxyglucose in lung tumor-bearing mice.

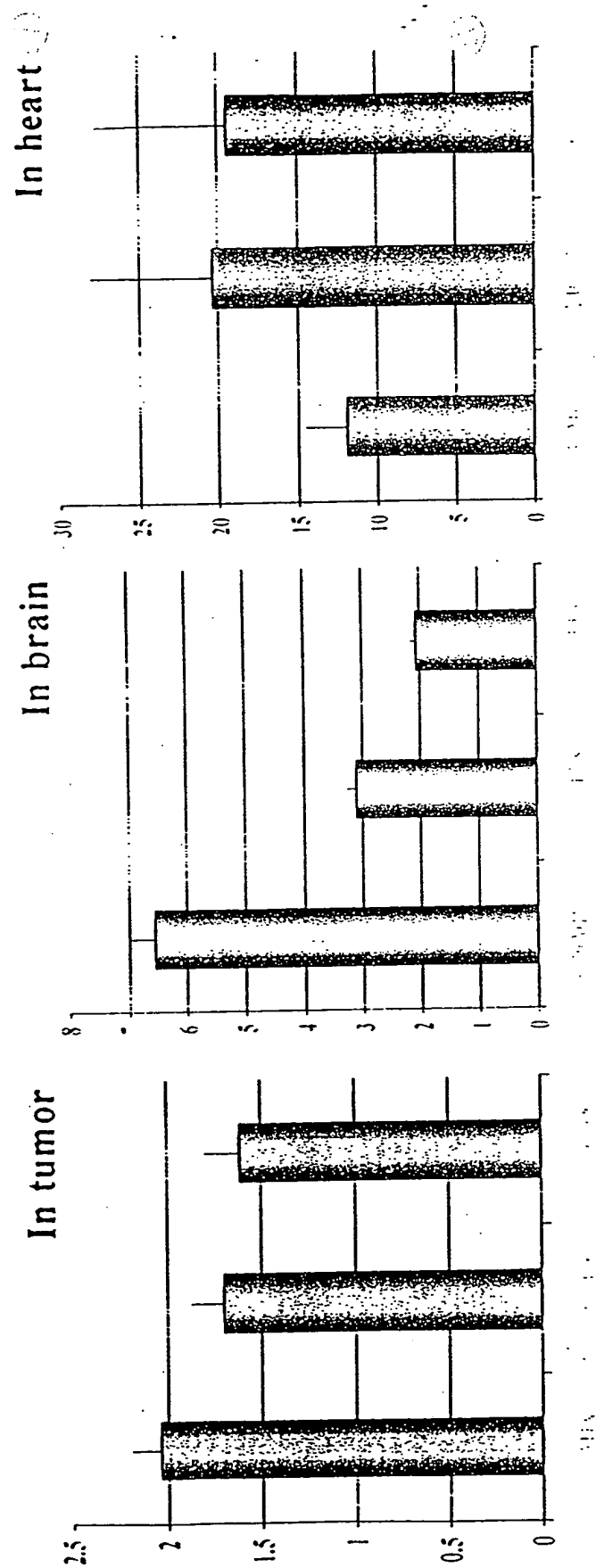


# *In Vivo* Uptake of $^{99m}\text{Tc}$ -EC-Neomycin in Lung Tumor-Bearing Nude Mice



**FIG. 79** In vivo tissue uptake of  $^{99m}\text{Tc}$ -EC-neomycin in lung tumor-bearing mice.

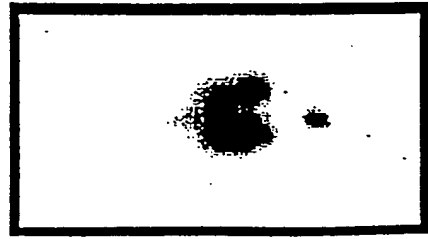
# *In Vivo* Uptake of $^{18}\text{F}$ FDG in Lung Tumor-Bearing Nude Mice



**FIG. 80** In vivo tissue uptake of  $^{18}\text{F}$ FDG in lung tumor-bearing mice.

$^{99m}\text{Tc-EC}$

$^{99m}\text{Tc-EC-Glucose(6)}$



0.5



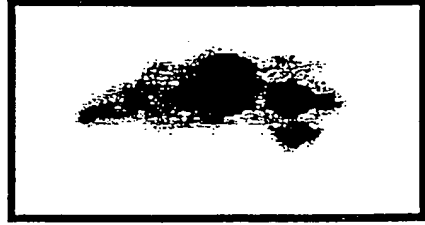
2



4hrs



0.5



2



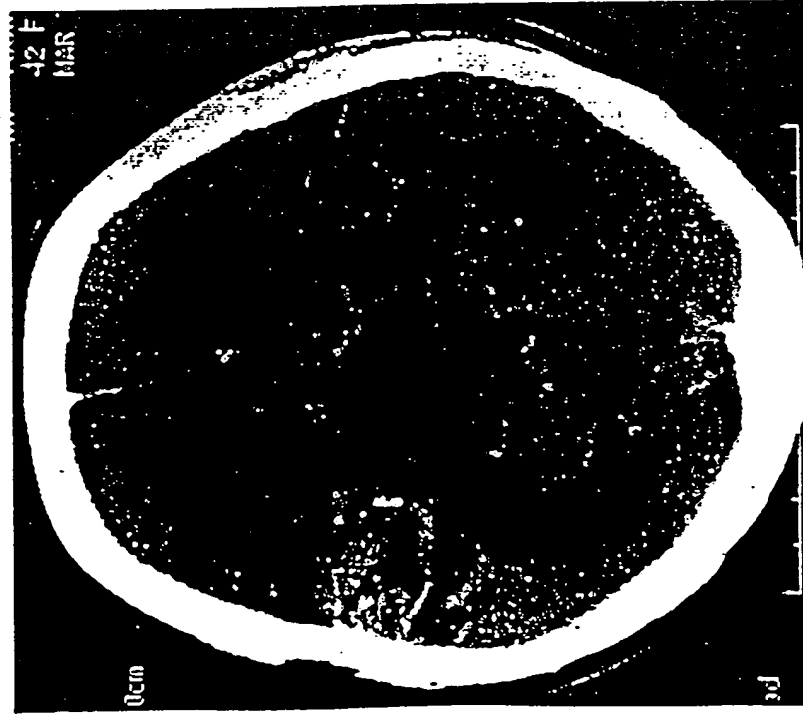
4hrs

Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-Glucose(6)}$  ( $100\mu\text{Ci/rat, iv.}$ ) showed that the tumor could be well visualized from 0.5-4 hours postinjection.

FIG. 81 Planar image of breast tumor-bearing rats after administration of  $^{99m}\text{Tc-EC}$  and  $^{99m}\text{Tc-EC-deoxyglucose}$  ( $100\mu\text{Ci/rat, iv.}$ ) showed that the tumor could be well visualized from 0.5-4 hours

Case 11/42

Dx : anaplastic astrocytoma



Pre OP



Post OP

MRI of a patient with astrocytoma.

FIG 87A

NA YOUNG SOON

697800 F42

0320000000 WONKWANG UNIV HOSP



5

99mTc EC DG 1.5H



9



13



17



6



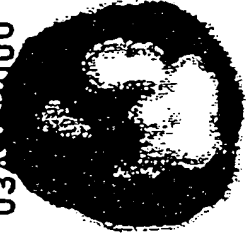
10



14



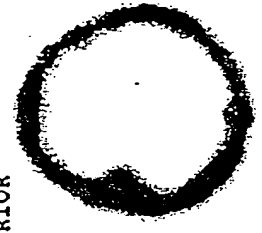
18



7



11



15



19



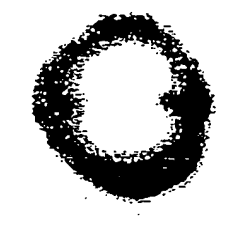
8



12



16



20

INFERIOR->SUPERIOR

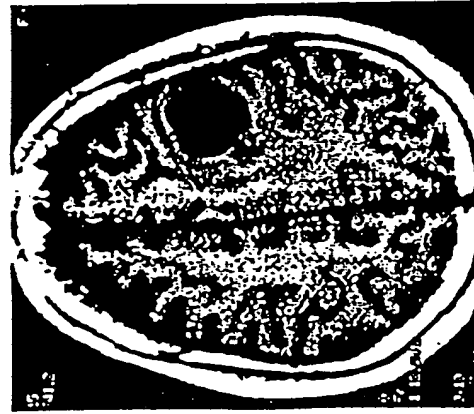
EC--DG Scan

POD-25D

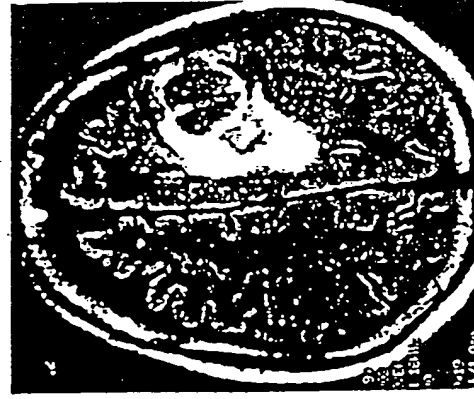
99mTc EC DG 1.5H patient with meningioma

CASE 2: 1/7/61

Dx: anaplastic astrocytoma with hemorrhage



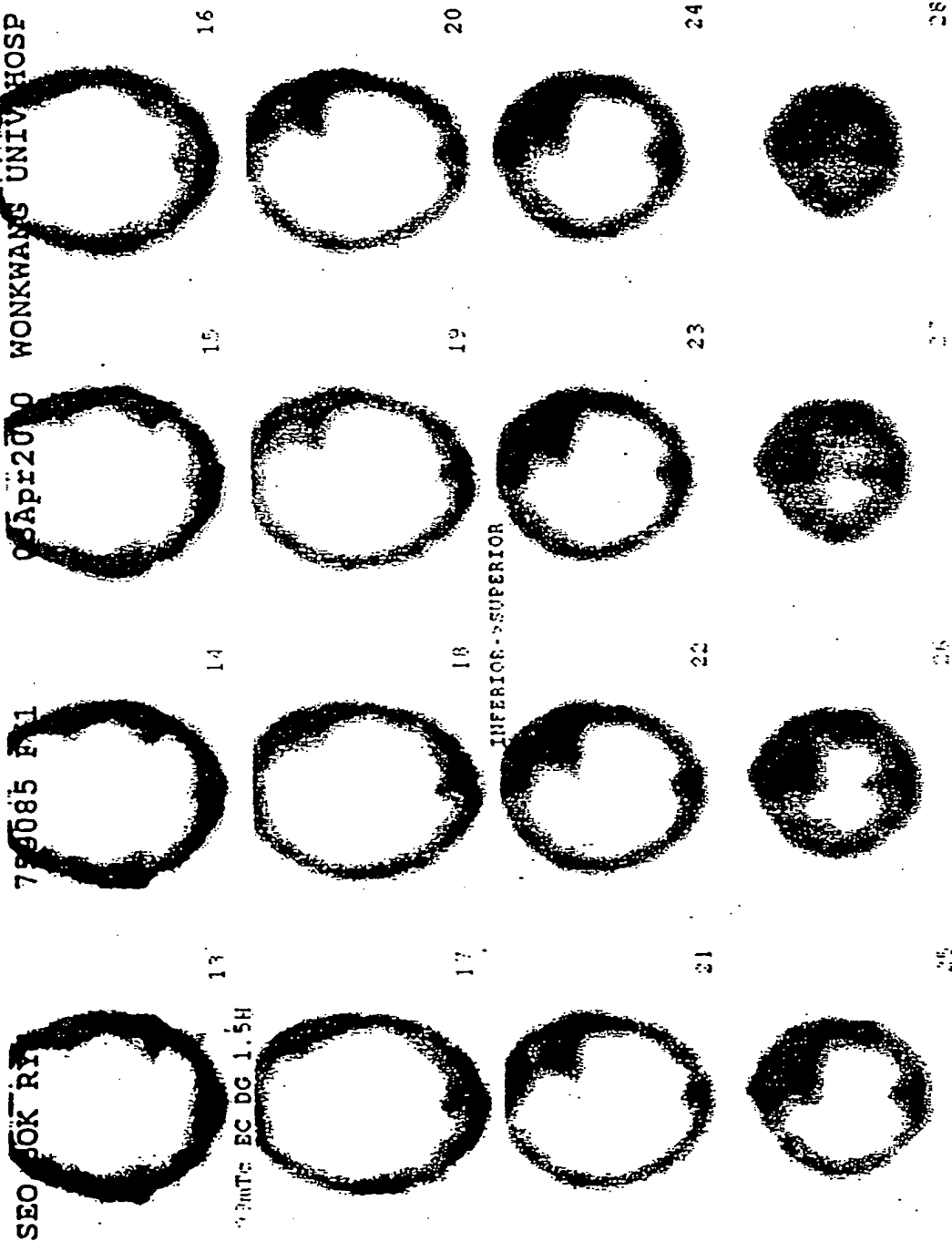
Pre -OP



Post-OP



FIG. 83A MRI of a patient with hemorrhagic astrocytoma.



EC-DG Scan POD-26D

FIG. 83B SPECT with  $^{99m}\text{Tc}$ -EC-DG of a patient with astrocytoma.

Case 5 : M/62

Dx : Meningioma



FIG. 84A MRI of a patient with benign meningioma.



**ITK-33A**

•

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17

3

99mTc Tc 99m 1.5H

INFERIOR->SUPERIOR:

**SPECT with  $^{99m}\text{Tc-EC-DG}$  of a patient with benign meningioma**

**FIG. 84B**

Case 4. M/11

Dx: Pul.module (only necrotic material on biopsy)

TB pleurisy

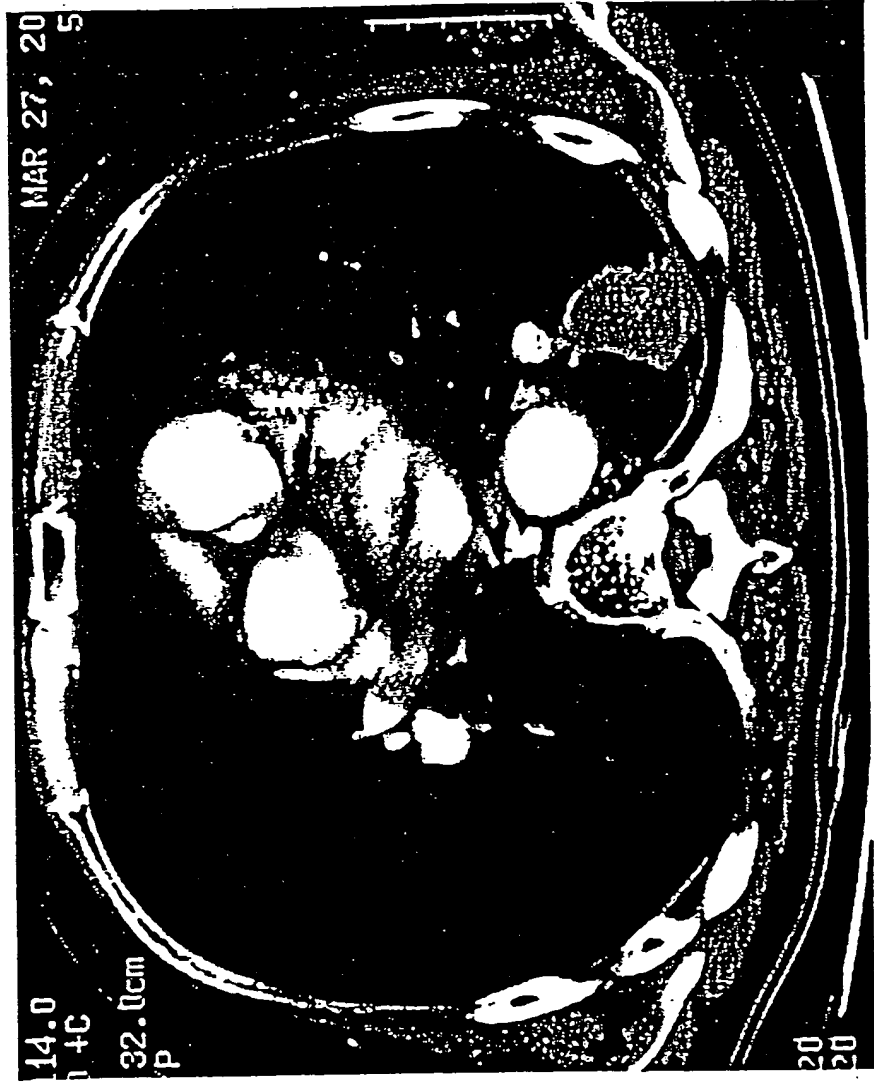


FIG. 85A CT of a patient with TB in lung.

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$^{99m}\text{Tc}$  EC DG 40MIN

INFERIOR->SUPERIOR

SPECT with  $^{99m}\text{Tc}$ -EC-DG of a patient with TB showed no focal

FIG. 85B

Case 5 : 59/M

Dx: Squamous carcinoma



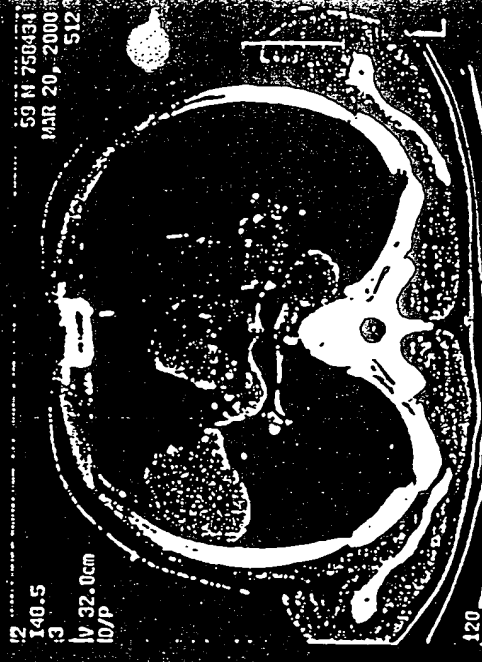
Pre RTX



Post RTX



Pre RTX



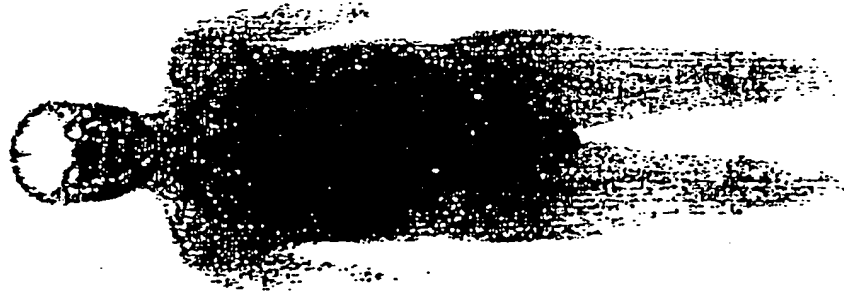
Post RTX

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EC DG 1H

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LUNG CANCER POST RTX 1WK

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POST

EC

FIG. 86B

Whole body images of  $^{99m}\text{Tc}$ -EC-DG of a patient with lung

cancer

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INFERIOR->SUPERIOR



EC DG 1H 30 MIN LUNG CANCER POST RTX 1WK

FIG. 86C

SPECT with  $^{99m}\text{Tc}$ -EC-DG of a patient with lung cancer, the tumor showed focal intensified uptake.

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